California High-Speed Rail Authority

RFP No.: HSR 14-32

Request for Proposals for Design-Build Services for Construction Package 4

Reference Material, Part C.9
PE4P Constructability Assessment Report (CAR)

Note: Southern limit of CP4 ends just north of Poplar Ave, at approximately station WS1 5880+00, even though this document shows the limit just north of 7th Standard Road. Work south of the contract limit of WS1 5880+00 should not be considered as part of the contract

CALIFORNIA HIGH-SPEED TRAIN

Engineering Report

Preliminary Engineering for Procurement Record Set Submission

Fresno to Bakersfield

Sierra Subdivision Construction Package 4 Constructability Assessment Report

October 2014

RFP No. HSR 14-32 – INITIAL RELEASE - 05/27/2015

CALIFORNIA
High-Speed Rail Authority

California High-Speed Train Project Engineering

Preliminary Engineering for Procurement
Record Set Submission
Fresno to Bakersfield
Sierra Subdivision
Construction Package 4
Constructability Assessment Report

Prepared by:

URS/HMM/Arup Joint Venture

October 2014

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List of Abbreviations

Authority	California High-Speed Rail Authority
BCC	balanced cantilever construction
BMP	best management practices
Caltrans	California Department of Transportation
CASQA	California Stormwater Quality Association
CDWR	California Department of Water Resources
CEQA	California Environmental Quality Act
CIP	cast-in-place
CP	construction package
CS	Construction Staging Area
EIS	Environmental Impact Statement
FB	Fresno to Bakersfield
FEIR	Final Environmental Impact Report
FSPLM	full span precast launching method
GI	ground investigation
HMF	Heavy Maintenance Facility
HSR	high-speed rail
ILM	incremental launching method
MSE	mechanically stabilized earth
MSS	moving scaffolding system
NEPA	National Environmental Policy Act
PE4P	Preliminary Engineering for Procurement
PSSSM	precast segmental span by span method
RC	regional consultant
RWQCB	Regional Water Quality Control Board
SCL	Skewed Crossing Laydown Area
SJVAPCD	San Joaquin Valley Air Pollution Control District
SWPPP	Stormwater Pollution Prevention Plan
SWRCB	State Water Resources Control Board
TDC	targeted design constituent
UPRR	Union Pacific Railroad

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Executive Summary

Executive Summary

The Preliminary Engineering for Procurement for the Fresno to Bakersfield section of the California High-Speed Train Project has been divided into three main construction packages (CPs) for design-build procurement purposes, from Fresno to 7th Standard Road which is seven miles north of Bakersfield.

The first construction package (CP1) involves high-speed rail-related works throughout the city of Fresno and is undergoing final design in preparation for construction. CP2-3 extends from E American Avenue, just outside the southern boundary of the city of Fresno, to a point on the proposed alignment 1 mile to the north of the Tulare County/Kern County line, representing approximately 66 miles out of the 114-mile total length of the FB section.

CP4 runs from 1 mile north the Kern County line (the end of CP2-3) to 7th Standard Road, east of the junction of Bowles St. and Santa Fe Way. CP4 represents approximately 29 miles out of the 114-mile total length of the FB section. This Constructability Assessment Report is specifically focused on CP4 and identifies possible locations for Construction Staging Areas, Precasting Yards, and skewed crossing Laydown Areas and also identifies issues such as noise, pollution, and traffic disruption.

Three possible Construction Staging and Precasting Areas are discussed in this report. The Precast Operations Yards should be near extended lengths of precast viaduct to minimize distances between the Precast Operations Yards and the locations of erection. A Precasting Facility can be set up in any of the Construction Staging Areas identified in this report.

The Construction Laydown Areas are required for a shorter period than the Construction Staging Areas and are required in order to construct the complex structures over waterways, existing highways, and railroads. There are no Construction Laydown Areas discussed in this report considering there will be no steel truss structures within the CP4 limits.

There are also two temporary Skewed Crossing Laydown Areas identified in this report, which are required in order to construct the high-speed rail elevated crossover structure over the BNSF. These sites would need to be acquired on a temporary basis, until the construction of the elevated crossover structure over the BNSF is complete.

It also provides commentary on assumed construction sequence and durations of main activities, general construction methods, third-party coordination, potential excavation hazards, groundwater management, right-of-way acquisition, and design and construction permits.

The major critical path construction activity for CP4 is anticipated to be the 4.7 miles of standard viaduct construction. This activity is expected to take 26 months starting 9 months after the commencement of the contractor mobilization which includes setting up the necessary Staging Areas and Precasting Facilities. The assumed 9 month lag is to allow the contractor to perform the necessary utility relocations, building demolition, and site clearing as well as setting up the batching/precasting facilities before the standard and non-standard viaduct construction can commence. A period of 3 months is assumed to demobilize and close out the project. This is a total of 38 months and assumes that the Contractor is not delayed by enabling works outside of their control such as third-party utility relocations and BNSF railroad relocations.

An alternate construction schedule has been developed which has a total duration of 30 months as a result of increasing the number of assumed standard viaduct working locations from four to six. This highlights the impact that resources and location constraints can have on a construction schedule.

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Section 1.0

Introduction

1.0 Introduction

1.1 Purpose

The purpose of this report is to identify possible locations for Construction Staging Areas, Precasting Yards, and Construction Laydown Areas and provide constructability input specific to the construction package (CP4) design. This report also identifies issues such as noise, pollution, and traffic disruption, as well as provides commentary on assumed construction sequence and durations of main activities, general construction methods, third-party coordination, potential excavation hazards, groundwater management, right-of-way acquisition, and design and construction permits.

1.2 Project Overview

In 1996, the state of California established the California High-Speed Rail Authority (Authority). The Authority is responsible for studying alternatives to construct a high-speed rail (HSR) system that will provide intercity HSR service on over 800 miles of track throughout California. This rail system will connect the major population centers of Sacramento, the San Francisco Bay Area, the Central Valley, Los Angeles, the Inland Empire, Orange County, and San Diego. The Authority is coordinating the project with the Federal Railroad Administration. The California HSR Project is envisioned as a state-of-the-art, electrically powered, high-speed, steel-wheel-on-steel-rail technology that will include state-of-the-art safety, signaling, and automated train-control systems.

The statewide HSR has been divided into a number of sections for the planning, environmental review, coordination, and implementation of the project. This *Constructability Assessment Report* is focused on the section of the HSR between Fresno and Bakersfield, specifically the CP4 subsection of the alignment extending from 1 mile north of the border between Tulare County with Kern County to 7th Standard Road, east of the junction of Bowles Street and Santa Fe Way. The limits of CP4 are shown schematically in Figure 1.3-1. All of the Construction Package limits are shown in Table 1.3-2.

1.3 Project Description

1.3.1 Fresno to Bakersfield High-Speed Rail Section

The proposed Fresno to Bakersfield (FB) Section of the HSR is approximately 114 miles long and traverses a variety of land uses, including farmland, large cities, and small cities. The FB Section includes viaducts and segments where the HSR will be at-grade or on embankment. The route of the FB Section passes by or through the rural communities of Bowles, Laton, Conejo, Armona, and Allensworth and the cities of Fresno, Hanford, Selma, Corcoran, Wasco, Shafter, McFarland, and Bakersfield.

The FB Section extends from north of Stanislaus Street in Fresno to the northern most limit of the Bakersfield to Palmdale Section of the HSR at Oswell Street in Bakersfield.

1.3.2 Alignments

The FB HSR Section is a critical link connecting the northern HSR sections of Merced to Fresno and the Bay Area to the southern HSR sections of Bakersfield to Palmdale and Palmdale to Los Angeles. The FB Section includes HSR stations in the cities of Fresno and Bakersfield, with a third station in the vicinity of Hanford. The Fresno and Bakersfield stations are this section's project termini.

The FB Section of the HSR is divided into 10 subsections. Table 1.3-1 and Figure 1.3-1 illustrates the subsections and their corresponding alignment prefix.

Figure 1.3-1
High-Speed Rail Corridor – Fresno to Bakersfield – Construction Package 4

The Preliminary Engineering for Procurement (PE4P) design will be based on the following preferred alignments:

- F1, M, H, K4, C2, P, A1, L1, WS1, and B3.

Table 1.3-1
FB Preferred Alignment Subsections

Alignment Prefix	Alignment Subsection Name	Location		County	EIR/EIS Name*
		Begin	End		
F1	Fresno	San Joaquin St (North of Stanislaus Street)	E Lincoln Ave	Fresno	BNSF
M	Monmouth	E Lincoln Ave	E Kamm Ave	Fresno	BNSF
H	Hanford	E Kamm Ave	Iona Ave	Fresno and Kings	BNSF (Hanford East)
K4	Kaweah	Idaho Ave	Nevada Ave	Kings	BNSF (Hanford East) (connects to C1 [Corcoran Elevated] or C2 [Corcoran Bypass])
C2	Corcoran Bypass	Nevada Ave	Ave 128	Kings and Tulare	Corcoran Bypass
P	Pixley	Ave 128	Ave 84	Tulare	BNSF
A1	Allensworth Bypass	Ave 84	Elmo Hwy	Tulare & Kern	Allensworth Bypass
L1	Poso Creek	Elmo Hwy	Whisler Rd	Kern	Allensworth Bypass (connects to BNSF [through Wasco-Shafter])
WS1	Through Wasco-Shafter	Whisler Rd	Hageman Rd	Kern	BNSF (through Wasco-Shafter)
B3	Bakersfield Urban	Hageman Rd	Baker St	Kern	Bakersfield Hybrid
*Environmental Impact Report/Statement					

CP1 B-C is 3.1 miles long and runs from north of Stanislaus Street in Fresno to East American Avenue. CP2-3 is 65.7 miles long and runs from E American Avenue (1 mile south of Fresno) to 1 mile north of the Kern County line. CP4 is approximately 28.1 miles long and runs from the end of CP2-3 to 7th Standard Road, east of the junction of Bowles St. and Santa Fe Way which is approximately 7 miles north of Bakersfield.

Table 1.3-2
CP Limits

Construction Package	Limits		Stationing		Miles
	Start	End	Start	End	
CP1 B-C	North of Stanislaus Street	E American Avenue	S 10806+00	S 10970+00	3.1
CP2-3	E American Avenue	1 mile north of the Kern/Tulare county line	587+30.67	4435+50	65.7
CP4	1 mile north of the Kern/Tulare county line	7th Standard Road	4435+50	6291+00	28.61
*Contract package limit is 6291+00 but rail alignment stops at 6275+00					

1.3.3 Overview of Construction Staging and Precasting Facilities

This report describes the requirements for temporary construction facilities for the HSR specific to CP4. Two main types of facilities are required: Large Construction Staging and Precasting Areas and smaller temporary Construction Laydown Areas and Skewed Crossing Laydown Areas.

The Construction Staging Areas will house incoming materials; provide areas for material preparation, storage of equipment, maintenance of equipment, operations preparation, and construction offices; and allow good housekeeping throughout the alignment. Haphazard staging of materials and equipment throughout the alignment would not be conducive to the construction process and is not normal practice. Preliminary locations for Construction Staging Areas are placed at regular intervals along the HSR route. The locations are meant to be low maintenance and out of the general public's way. Each site will regularly and frequently receive materials and equipment; therefore, proximity to main roads and direct access to construction side roads and arterial roads are important for reducing the impact on the general flow of traffic. Three possible Construction Staging Areas are discussed in this report.

The Precast Operations Yards should be near extended lengths of precast viaduct to minimize distances between the Precast Operations Yards and the locations of erection. Rural locations are desirable for precast sites; these facilities will create visual and noise impacts. A Precasting Facility can be set up in any of the Construction Staging Areas identified in this report.

There are two temporary Skewed Crossing Laydown Areas identified in this report which are required to construct the HSR elevated slab over the BNSF. These sites would need to be acquired on a temporary basis, until the construction of the elevated slabs over the BNSF is complete.

No Construction Laydown Areas are included in this report as there are no steel truss structures within the CP4 limits.

This report describes the process by which the Staging, Precasting, and Skewed Crossing Laydown Areas were chosen and expands on the reasons each site was selected. The proposed areas in this report are preliminary and contingent on further detailed investigations for suitability. These sites will ultimately be the responsibility of the Contractor to acquire.

Table 1.3-3 lists the proposed sites and their access points.

Table 1.3-3
Proposed Staging and Precasting Areas

#	Location	Type	Name	Size (acres)	Construction Access Points
1	West from Central Valley Hwy/SR 43	CS	CS1	165	North and south from Central Valley Hwy/SR 43 and west on Garces Hwy
2	One mile south of the city of Wasco	CS	CS2	177	North and south from Central Valley Hwy/SR 43 to Poso Ave
3	Shafter	CS	CS3	67	North or south on Central Valley Hwy/SR 43 access via Weidenbach St and Petrol Rd
CS: Construction Staging Area					

Table 1.3-4 lists the proposed Skewed Crossing Laydown Areas and their access points.

Table 1.3-4
Proposed Skewed Crossing Laydown Areas

#	Location	Type	Name	Size (acres)	Construction Access Points
1	1 mile south of the city of Wasco	L	SCL1	18	From Central Valley Hwy/SR 43
2	Less than 1 mile southeast of the city of Shafter	L	SCL2	29	Central Valley Hwy/SR 43 to E Los Angeles Street
SCL: Skewed Crossing Laydown Area					

Appendix A shows the locations of the proposed Construction Staging, Precasting, and Laydown Areas.

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Section 2.0

Segment Construction Packaging

2.0 Segment Construction Packaging

The PE4P for the Fresno to Bakersfield section of the HSR has been divided into three main CPs from Fresno to 7th Standard Road which is seven miles north of Bakersfield. The focus of this report is CP4.

2.1 Construction Package 4

CP4 encompasses the following preferred alignment:

- A1 part – 9.28 miles (FB 15% A1 alignment is a total of 19.03 miles).
- L1 – 3.18 miles.
- WS1 Part – 16.18 miles (FB 15% WS1 alignment is a total of 20.63 miles).
- **Total – 28.61 miles.**

Table 2.1-1
CP4 Limits

Construction Package	Start	Finish	Approx. Length (miles)	Key Alignment Reference
CP4	1 mile north of the Kern/Tulare county line	7th Standard Road	28.61	A1 L1 WS1

CP4 runs from 1 mile north the Kern County line (the end of CP2-3) to 7th Standard Road, east of the junction of Bowles St. and Santa Fe Way. CP4 represents approximately 29 miles out of the 114-mile total length of the FB section.

The CP4 alignment crosses through rural areas in Tulare County and enters Kern County about 2.7 miles west of SR 43. Heading south into Kern County, the A1 alignment curves to the east and meets SR 43 at about Taussig Ave where A1 becomes the L1 alignment. The L1 alignment continues along the west side of SR 43 and the BNSF railroad until it reaches the north side of Wasco and becomes the WS1 alignment for the remainder of the CP4 subsection. Through Wasco the alignment is on elevated structure/viaduct and retained embankment until it crosses to the east of the BNSF railroad just south of Jackson Avenue, returning to grade and staying approximately parallel to the east side of the BNSF railroad and SR 43.

The WS1 alignment rises to an elevated structure as it approaches Shafter just north of Tulare Avenue. Just south of Riverside Street the alignment crosses back to the west side of both the BNSF railroad and SR 43. At Los Angeles Avenue, SR 43 turns south and the alignment continues parallel to Santa Fe Way, returning to grade south of Burbank Street, and terminates at the intersection of Santa Fe Way with 7th Standard Road, north of Bakersfield.

The CP4 alignment includes at-grade and embankment rail sections as well as retaining walls, bridges and elevated structures. This contract also includes numerous secondary transverse vehicular and pedestrian bridges at select local street intersections. The design requires shallow and deep foundations, retaining walls, and earthwork embankments for the proposed improvements. The key project features are described in Table 2.1-2, from north to south. The table has been populated with the current 15% design structures. Please consult other contract documents for the most updated information.

Table 2.1-2
Summary of Significant Structures in CP4

Structure Type	Approx. Start Station (ft)	Approx. End Station (ft)	Description of Location	Approx. Length (ft)	Structure ID
At-Grade	4435+50	4925+51	From south of Avenue 8 to south of Elmo Highway	49,001	At-Grade 1
At-Grade	5154+50	5191+50	From south of Elmo Highway to south of W Sherwood Ave	3,700	At-Grade 2
Retained Embankment	5191+50	5225+40	From south of W Sherwood Ave to north of Poso Creek	3,390	Retained 1
Structure	5225+40	5227+80	From north of Poso Creek to south of Poso Creek	240	Structure 1
Retained Embankment	5227+80	5271+60	From south of Poso Creek to north of Taussig Ave	4,380	Retained 2
At-Grade	5271+60	5322+33	From north of Taussig Ave to south of Whisler Rd	5,073	At-Grade 3
At-Grade	5422+50	5551+00	From south of Whisler Road to north of Hwy 46	12,850	At-Grade 4
Retained Embankment	5551+00	5556+40	From north of Hwy 46 to north of Hwy 46	540	Retained 3
Structure	5556+40	5557+60	From north of Hwy 46 to south of Hwy 46	120	Structure 2
Retained Embankment	5557+60	5564+80	From south of Hwy 46 to north of 4th St	720	Retained 4
Structure	5564+80	5682+95	From north of 4th Street to north of Prospect Ave	11,815	Structure 3
Retained Embankment	5682+95	5709+50	From north of Prospect Ave to north of Kimberlina Road	2,655	Retained 5
At-Grade	5709+50	5716+02	From north of Kimberlina Rd to Kimberlina Rd	652	At-Grade 5
Structure	5716+02	5716+70	From Kimberlina Rd to south of Kimberlina Rd	68	Structure 4

Structure Type	Approx. Start Station (ft)	Approx. End Station (ft)	Description of Location	Approx. Length (ft)	Structure ID
At-Grade	5716+70	5928+55	From south of Kimberlina Rd to south of W Fresno Ave	21,185	At-Grade 6
Retained Embankment	5928+55	5955+30	From south of W Fresno Ave to north of E Tulare Ave	2,675	Retained 6
Structure	5955+30	6117+25	From north of E Tulare Ave to south of Orange Street	16,195	Structure 5
Retained Embankment	6117+25	6151+00	From south of Orange St to south of Burbank St	3,375	Retained 7
At-Grade	6151+00	6275+00	From south of Burbank St to 7th Standard Rd	12,400	At-Grade 7

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Section 3.0

Construction Staging and Precasting Areas

3.0 Construction Staging and Precasting Areas

The Construction Staging Areas will house incoming materials; provide areas for material preparation, storage of equipment, maintenance of equipment, operations preparation, and construction offices; and allow good housekeeping throughout the alignment. Haphazard staging of materials and equipment throughout the alignment would not be conducive to the construction process and is not normal practice. Preliminary locations for Construction Staging Areas are placed at regular intervals along the HSR route. The locations are meant to be low maintenance and out of the general public's way. Each site will regularly and frequently receive materials and equipment; therefore, proximity to main roads and direct access to construction side roads and arterial roads are important for reducing the impact on the general flow of traffic. Three possible Construction Staging Areas are discussed in this report.

The Precast Operations Yards should be near extended lengths of precast viaduct to minimize distances between the Precast Operations Yards and the locations of erection. Rural locations are desirable for precast sites; these facilities will create visual and noise impacts. A Precasting Facility can be set up in any of the Construction Staging Areas identified in this report.

There are various means and methods associated with viaduct construction which are discussed in section 6.6. As the overall length of continuous standard span viaduct in CP4 is relatively short, it may be more economical to use other means of construction such and conventional cast-in-place (CIP) which is widely used in California or moving scaffolding system (MSS) alleviating the need for establishing a Precasting Facility.

3.1 Construction Staging Areas Criteria

The following four criteria are the guidelines for the selection of Construction Staging Areas and Precasting Facilities.

3.1.1 Traffic

Selected areas are to have direct access to arterials from major highways. Direct access to the HSR right-of-way affords direct transport of materials and equipment to construction sites with minimal impacts on traffic. Sites should also be selected to minimize interference with pedestrians, bicyclists, and transit as possible.

Precast Operations Yards should be located within the same footprint as Construction Staging Areas to minimize cost and potential environmental impacts.

The load and volume capacity of existing structures and roads would need to support construction operations. An analysis of these existing roads and structures would be undertaken by the contractor prior to final site selection. Similarly, a site-specific investigation of horizontal and vertical clearances and of existing geometric road conditions, as they pertain to construction equipment mobility and transport, would need to be undertaken by the contractor.

3.1.2 Area

A minimum of 80 acres is desired for construction staging operations. In addition to this 80-acre minimum area, a Precasting Facility requires a minimum of 17 acres. The size of the staging areas depends on the areas available in each location. Sites must meet the minimum area requirements because the amount of available space affects the production schedule, especially for the precast structural sections.

3.1.3 Location

Construction Staging Areas should be evenly distributed along the alignment to minimize the distances between construction sites. The staging areas should be spaced 15 to 25 miles apart. Locations within the HSR right-of-way would minimize land acquisitions. Floodplains and environmentally sensitive areas should be avoided. Being in a floodplain is a risk to the contractor. All sites will be outside of Union Pacific Railroad (UPRR) and BNSF facilities' rights-of-way and will observe a minimum of 25 feet offset from their tracks/operations.

To minimize the distances that the large precast sections are transported, proposed Precast Operations Yards should be close to where the precast sections will be erected. The site selection of Precasting Facilities will greatly affect the production efficiency of the large precast members — particularly consideration of the length of time to fabricate and the time and cost to transport and erect precast members. To reduce the contractor's cost and risk, precast operations should not be in areas that are sensitive to noise or that could restrict working hours.

3.1.4 Accessibility

The locations should be close to major roadways and to on- and off-ramps. Access to major roadways would aid in shipping to and receiving from the construction site and would minimize travel on side roads.

The benefits of access to existing utilities are reduced construction-site development time and reduced costs. Minimizing impacts on average daily traffic is a main consideration in the selection of suitable sites. Where traffic impacts are foreseen, the contractor should put in place a location-specific, activity-based trip schedule to minimize those impacts. Accessibility to these sites is a key factor for efficient rates of production.

3.2 Proposed Precast Operation Layout Schematic

As stated in Section 3.1.2, a minimum of 17 acres is required for the Precast Operations Yards. Table 3.2-1 outlines how these 17 acres are composed. Figure 3.2-1 graphically shows the proportions into which the area would be divided.

Table 3.2-1
Composition of Precast Operations Yards

Facility Type	Area (ft^2)
Batch Plant	70,000
Ancillary Space	70,000
Rebar Storage & Bending Area	43,000
Power Station	11,000
Equipment Yard	22,000
Material Storage Yard	300,000
Molding Area	50,000
Rebar Jig Area	65,000
Material Testing & Office Area	65,000
Access Roads	65,000
Total	739,000 (17 acres)

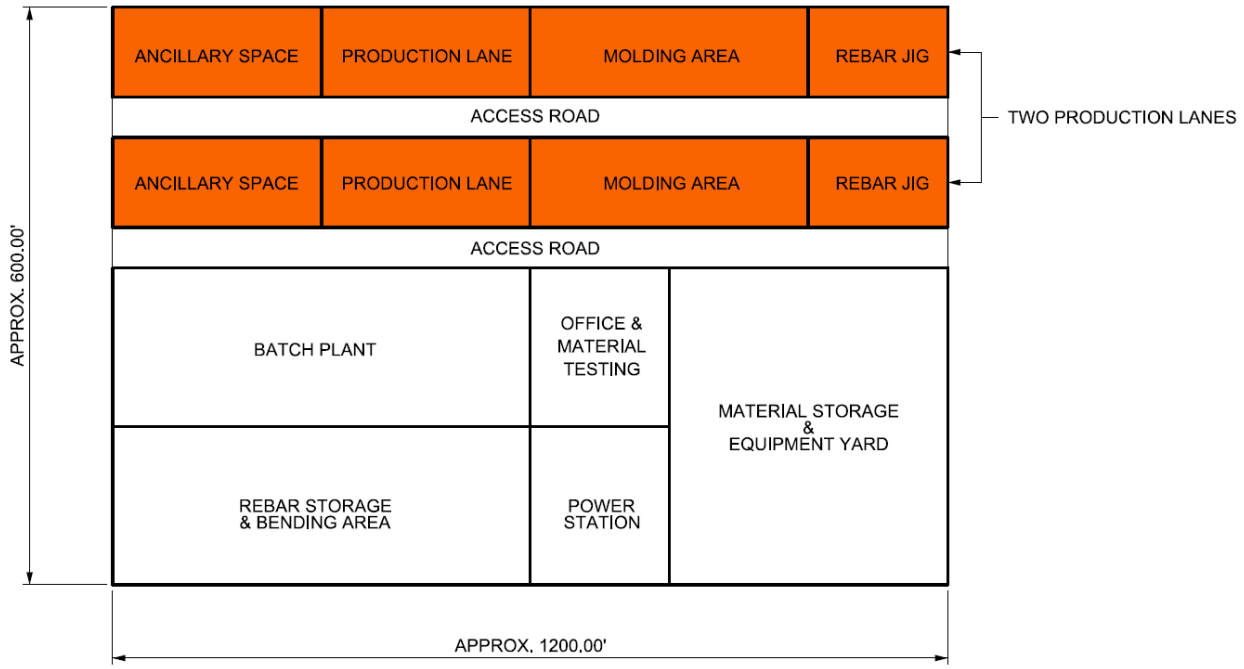

Figure 3.2-1
Proportions of Typical Precast Operations Yards

3.3 Construction Staging Area 1

3.3.1 General Location

Site CS1 is between Allensworth and Wasco, approximately 2.5 miles west of Central Valley Hwy/SR 43. The site consists of two parcels totaling approximately 165 acres. The area is bounded by Garces Hwy to the south, by Scofield Avenue to the west, and by private roads to the north and to the east (see Figure 3.3-1). The A1 Alignment bisects the site.

3.3.2 Description of Site

Site CS1 is in a rural farm area with no dwellings on or around the site. A notable impact of using this area for construction staging would be the loss of agricultural land. The BNSF railroad could provide transportation for equipment and materials to the site but is approximately 2.5 miles away.

3.3.3 Criteria Met

Site CS1 is 2.5 miles west of Central Valley Hwy/SR 43. The site provides access to the HSR right-of-way and to major roads. Because the site is in an undeveloped area, it should have minimal interference with pedestrians, bicyclists, and transit. There is adequate space to stage the necessary construction equipment and materials. Proposed construction access to this site from north and southbound Central Valley Hwy/SR 43 would be via Garces Hwy, and there are no proposed road closures. Local roads would need to be repaired or refinished upon completion of construction in this location because the wearing to the existing roadway elements would be excessive.

No documented environmentally sensitive areas or floodplains are within the area, but a large floodplain is nearby to the west of the site.

3.3.4 General Size, Shape, and Location

The 165-acre site consists of a square formed from two rectangular parcels of land and is ideally located in an undeveloped rural area.

3.3.5 Site Summary

Site CS1 is an adequately sized location for staging construction materials and equipment. The HSR right-of-way bisects the site and provides access to service roads and to construction areas.

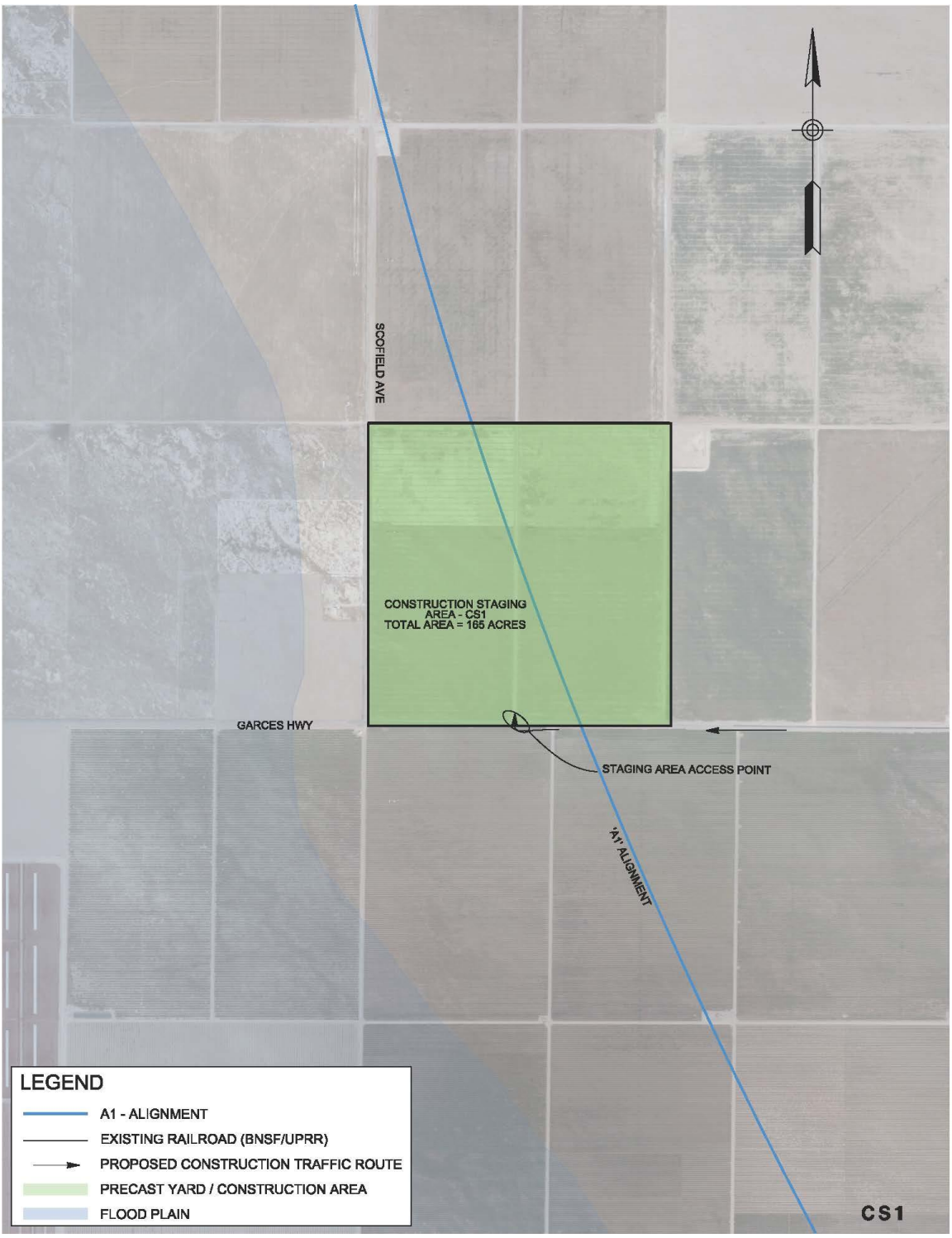

Figure 3.3-1
Site CS1

3.4 Construction Staging Area 2

3.4.1 General Location

Site CS2 is directly east of the city of Wasco and is within a proposed Heavy Maintenance Facility (HMF) area. The site is bounded by Poso Avenue to the north, by Wasco Avenue to the west, Filburn Avenue to the south, and by an unidentified road to the east (see Figure 1.3-1). The site consists of two parcels of agricultural land as well as a machinery facility and two residential dwellings. This area would service the WS1 Alignment.

3.4.2 Description of Site

The land is mainly used for agriculture. The occupants of two dwellings within the area may need to be relocated. Impacts to the area would be a loss of agricultural land and the possible relocation of the current occupants of the two dwellings.

3.4.3 Criteria Met

The traffic volume in this area is assumed high because the site is on the periphery of an urban area. It is anticipated that extending the necessary utilities will not be an issue. There are no floodplains or identified environmentally sensitive areas at this location. The total area of this site is 177 acres and it is located along the proposed HSR alignment. The proposed access to site CS10 would be via Poso Avenue and Wasco Avenue from Central Valley Hwy/SR 43 north and southbound. There are no proposed road closures. Local roads would need to be repaired or refinished upon completion of construction in this location because the wearing to the existing roadway elements would be excessive.

CS2 is on the periphery of Wasco and has a flat topography; there are no foreseen restrictions on equipment use by horizontal clearances or by existing geometric road conditions. Construction equipment requiring assembly in the Staging Area would be restricted by the vertical clearance of overhead power lines.

3.4.4 General Size, Shape, and Location

The 177-acre site is rectangular and is in an ideal location for staging materials and equipment as it is close to necessary utilities and within a proposed HMF site. The space is adequate to house construction equipment and materials.

3.4.5 Site Summary

This site is adequate in size and location for staging construction materials and equipment. The proposed site is adjacent to the HSR right-of-way and would provide access to service roads and to construction areas. One business and the residents of two dwellings may need to be relocated.

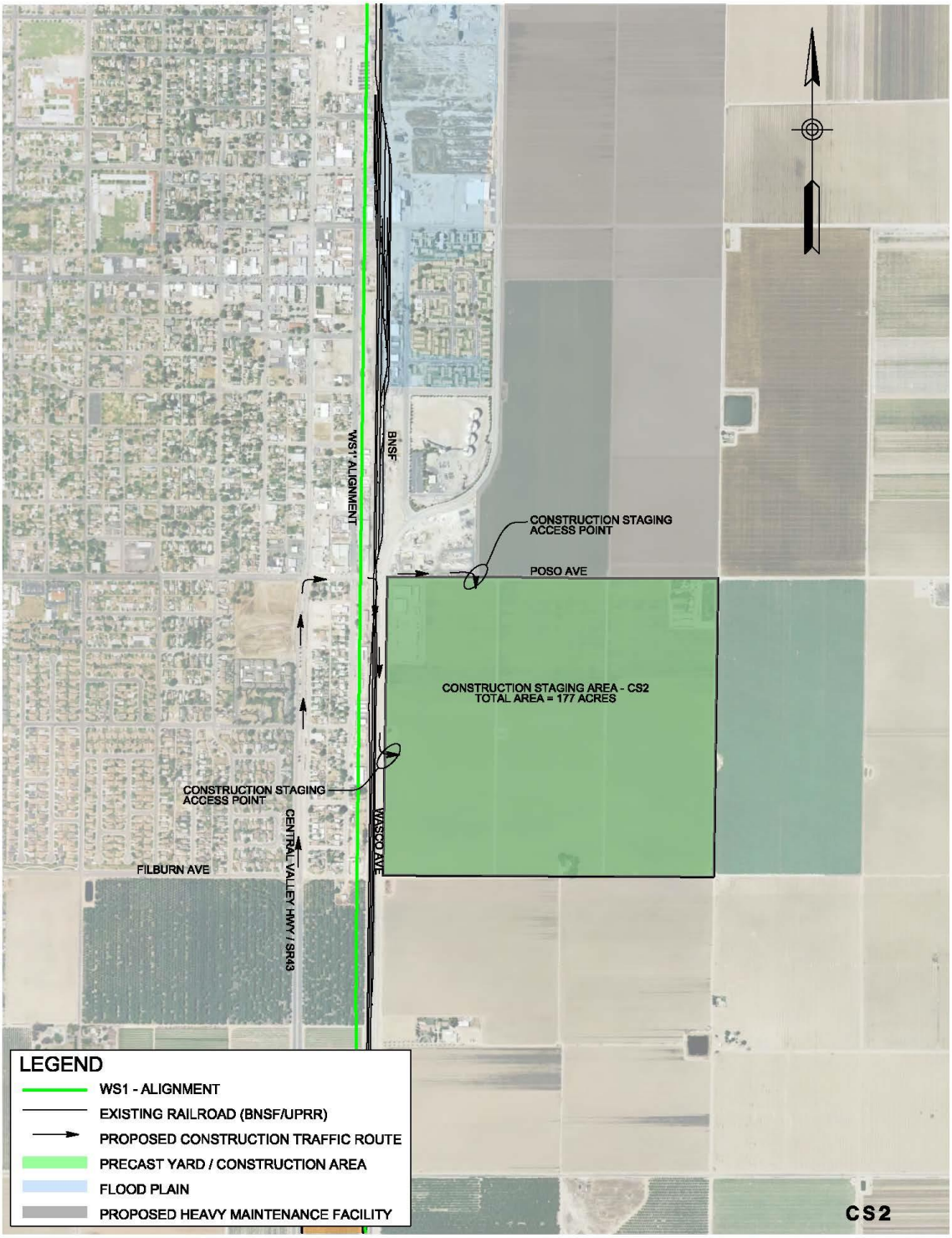

Figure 3.4-1
Site CS2

3.5 Construction Staging Area 3

3.5.1 General Location

Site CS3 is within a proposed HMF footprint approximately 4.5 miles south of the city of Shafter. The site is bounded by Santa Fe Avenue/South Central Valley Hwy/SR 43 to the northeast, by Weidenbach Street to the west, and by Petrol Road to the south (see Figure 3.5-1). This site would service the WS1 Alignment.

3.5.2 Description of Site

This site would not require the procurement of land in excess of the proposed HMF footprint. No demolition of structures or relocation of occupants would be required. Construction access would be via Weidenbach Street from southbound Santa Fe Avenue/South Central Valley Hwy/SR 43 and via Petrol Road from northbound Santa Fe Avenue/South Central Valley Hwy/SR 43.

3.5.3 Criteria Met

The site is in an undeveloped area and utilities would likely need to be brought to the site. There are developments within a mile of CS3 (a Target distribution center), so the necessary utilities are anticipated to come from approximately 1 mile away. The site meets the minimum area requirement, has additional work area, and is near extended sections of precast viaduct.

Site CS3 runs parallel to Santa Fe Avenue/South Central Valley Hwy/SR 43, a major roadway that would provide favorable access for shipping and receiving of materials. Also, the site is parallel to the HSR right-of-way and would allow access to construction side roads. There are no proposed road closures. Local roads would need to be repaired or refinished upon completion of construction in this location because the wearing to the existing roadway elements would be excessive.

The proposed footprint does not encroach on any documented environmentally sensitive areas.

3.5.4 General Size, Shape, and Location

Site CS3 is approximately 67 acres and is composed of multiple parcels of land.

3.5.5 Site Summary

Site CS3 is favorably located along the HSR right-of-way. The site is within a proposed HMF footprint, is close to long spans of viaduct and to a major highway, and has adequate work space.

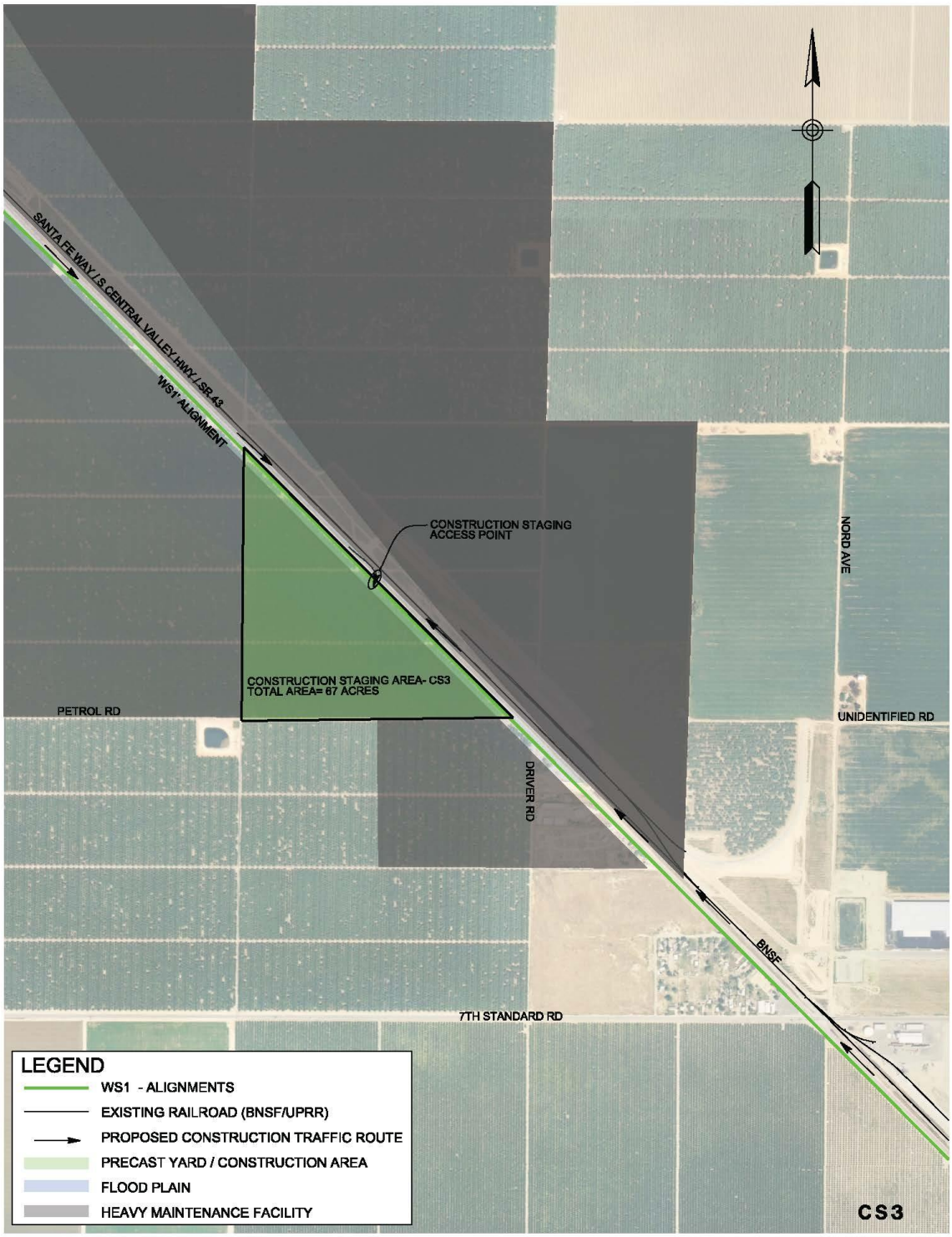

Figure 3.5-1
Sites CS3

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Section 4.0

Skewed Crossing Laydown Areas

4.0 Skewed Crossing Laydown Areas

4.1 Skewed Crossing Laydown Criteria

The Skewed Crossing Laydown Areas are similar to Construction Laydown Areas in that they are required for a short period of time to construct elevated concrete crossover structures over existing railroads and highways. There are two Skewed Crossing Laydown Areas identified in this report. In contrast to the Precasting and Construction Staging locations, these Laydown Areas are determined by the location of the elevated crossover structures, and therefore the same criteria cannot be used to assess these locations. The criteria used during the selection process for the Laydown Areas are size and accessibility.

It is important to note that Laydown Area for structures specifically to cross existing railroads may by necessity be located within floodplains. The permitting/mitigation for locating these sites within the floodplains and any associated restrictions on construction will be the responsibility of the contractor.

4.1.1 Accessibility

The selected locations need to be easily accessible in order to transport the large concrete girders to their erection sites.

4.1.2 Size

The temporary Skewed Crossing Laydown Areas are site-specific but should typically be between 5 and 10 acres, to provide the contractor with sufficient space to erect the elevated crossover structures over BNSF.

4.2 Skewed Crossing Laydown Area 1

4.2.1 General Location

Site SCL1 is less than 1 mile south of the city of Wasco. This is a Skewed Crossing Laydown Area specifically required for the construction of an elevated slab structure over the BNSF railroad at this location. The site is bounded by Jackson Avenue to the north, the BNSF railway to the east, Central Valley Hwy/SR 43 to the west, and Prospect Avenue to the south (see Figure 4.2-1). The site consists of one full parcel and half of another parcel of land. This area would service the skewed crossing of the WS1 Alignment over BNSF at this location. No documented environmentally sensitive areas or floodplains are in the immediate area.

4.2.2 Accessibility

The site is in a rural area and the land is used for agriculture. The site would need to be acquired on a temporary basis until the construction of the elevated slab structure is complete. The occupants of a single dwelling may need to be temporally relocated during the construction. The traffic volume in this area is assumed low because the surrounding areas are made up of agricultural land. There are no floodplains or identified environmentally sensitive areas at this location. The proposed access to site SCL1 would be directly from Central Valley Hwy/SR 43. There are no proposed road closures. Local roads would need to be repaired or refinished upon completion of construction in this location because the wearing to the existing roadway elements would be excessive.

4.2.3 Size

The total area of this site is 18 acres. Construction equipment requiring assembly in the staging area would be restricted by the vertical clearance of overhead power lines.

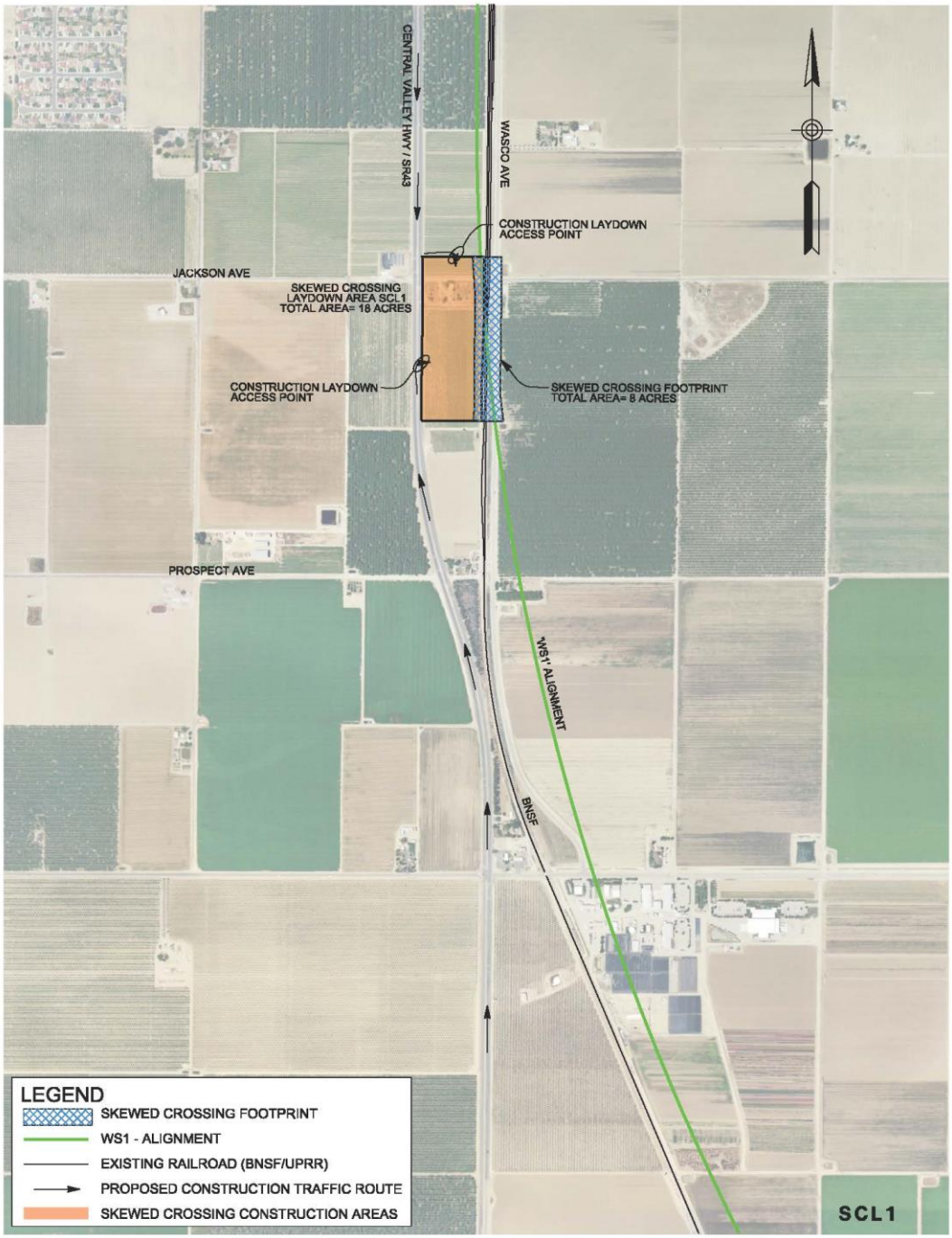

Figure 4.2-1
Site Skewed Crossing Laydown 1

4.3 Skewed Crossing Laydown Area 2

4.3.1 General Location

Site SCL2 is less than 1 mile southeast of the city of Shafter. This is a Skewed Crossing Laydown Area specifically required for the construction of an elevated slab structure over the BNSF railroad at this location. There are two sites at this location. The first site is bounded by the BNSF railway to the west with E Ash Avenue to the north (see Figure 4.3-1). The second site is a 300-foot strip of land along the BNSF and is bounded by E Los Angeles Avenue to the north. A total of four parcels of land would be affected. This area would service the skewed crossing of the WS1 Alignment over BNSF at this location. No documented environmentally sensitive areas or floodplains are in the immediate area.

4.3.2 Accessibility

The site is close to an urban area and the land is used for both commercial and agricultural purposes. The site would need to be acquired on a temporary basis until the construction of the elevated slab structure is complete. The traffic volume in this area is assumed moderate because the site is close to an urban area. There are no floodplains or identified environmentally sensitive areas at this location. The proposed access to site SCL2 would be via Central Valley Hwy/SR 43 to E Los Angeles Avenue. There are no proposed road closures. Local roads would need to be repaired or refinished upon completion of construction in this location because the wearing to the existing roadway elements would be excessive.

4.3.3 Size

The total area of this site is 29 acres. Construction equipment requiring assembly in the staging area would be restricted by the vertical clearance of overhead power lines.

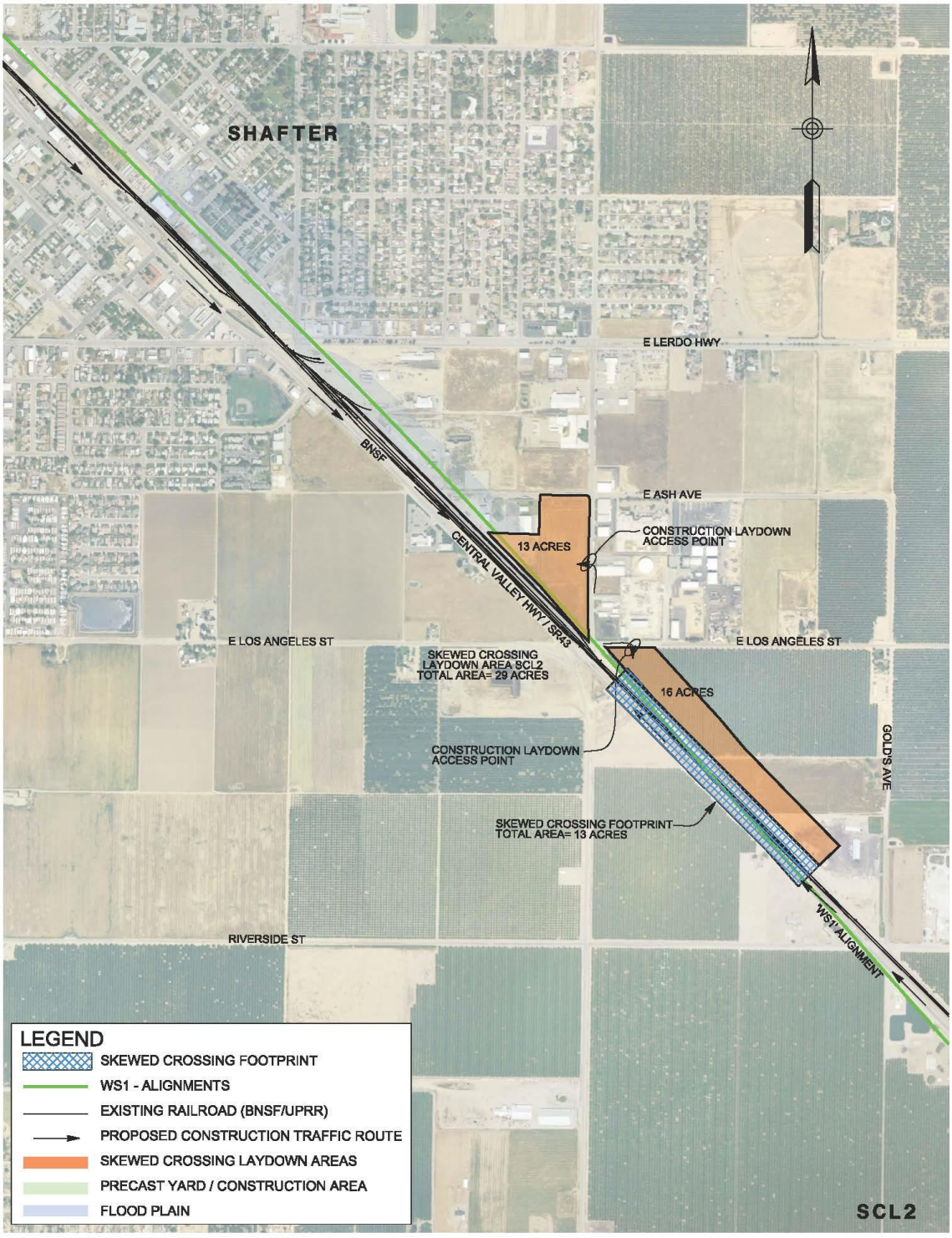

Figure 4.3-1
Site SCL2

Section 5.0

Construction Staging and Sequencing

5.0 Construction Staging and Sequencing

5.1 Construction Timing Constraints

Due to the scale of construction required for the HSR, there is a potential that the available supply of materials, equipment and skilled labor will not be able to meet the project's demand in order to meet the aggressive schedule outlined in the 2014 Draft Business Plan. The linear nature of the project presents added demand for careful logistical planning of material supply routes and infrastructure.

It is also anticipated that there will be environmental constraints to individual construction activities throughout CP4, for example bird nesting seasons and seasonal flooding. Due to the overall anticipated construction duration it is considered that these seasonal constraints should not be critical to the overall construction schedule.

The following is a summary of key activities specific to CP4 that may constrain the construction schedule and impact the critical path if not properly sequenced:

- Right-of-way acquisitions (permanent and temporary).
- Utility relocations as discussed in Section 6.6.7.
- BNSF and Lone Star track realignments on the WS1 alignment as shown on the PE4P RS CP4 Alignment drawings (URS/HMM/Arup August 2014).
    - BNSF Mainline realignments - Sta. 5657+23 to 5829+00 and Sta. 6103+95 to 6135+30.
    - Lone Star Spur realignment – Approximately 1 mile (Sta. 6105+00).
- Canal Realignments and Retention Basins on the A1, L1 and WS1 alignments as shown on the PE4P RS CP4 Alignment drawings (URS/HMM/Arup August 2014).
- Wildlife Crossings within the A1 and L1 subsections.
- Rerouting of roadways as shown on the PE4P RS CP4 Alignment drawings (URS/HMM/Arup August 2014).
    - Sante Fe Way– sta. 6030+60 to 6291+00 (approx. 4.9 miles).
    - Scofield Ave to Garces HWY - sta. 4530+00 to 4600+00 (approx. 1.4 miles).
    - Magnolia Ave to Pond Rd – sta. 4755+00 to 4795+00 (approx. 0.8 miles).
- Avoid planning construction activities in the fourth quarter of the year that will impact BNSF operations as this is their busiest time of year.
- Timely order and delivery of long lead items.

The major critical path construction activity for CP4 is anticipated to be the 4.7 miles of standard viaduct construction. This activity is expected to take 26 months starting 9 months after the commencement of the contractor mobilization which includes setting up the necessary Staging Areas and Precasting Facilities. The assumed 9-month lag is to allow the contractor to perform the necessary utility relocations, building demolition, and site clearing as well as setting up the batching/precasting facilities before the standard and non-standard viaduct construction can commence. A period of 3 months is assumed to demobilize and close out the project. This is a

total of 38 months and assumes that the Contractor is not delayed by enabling works outside of their control such as third-party utility relocations and BNSF railroad relocations.

An alternate construction schedule has been developed which has a total duration of 30 months as a result of increasing the number of assumed standard viaduct working locations from four to six. This highlights the impact that resources and location constraints can have on a construction schedule.

This is a preliminary assessment of the expected construction durations.

5.2 Enabling Works

To enable the construction of the heavy civil engineering works (earthworks, and viaducts), it will be important to implement enabling works including the following:

- Right-of-way acquisition.
- Obtaining necessary construction permits.
- Set up staging areas and precasting facilities.
- Set up worker health, safety and welfare facilities.
- Set up contractor administration offices.
- Site clearance and demolition.
- Construct construction access roads.
- Critical utility relocations and protection works.
- Canal relocations.
- Railroad relocations.
- Permanent grade crossing closures.

If the temporary construction facilities identified in sections 3 and 4 are acquired and cleared early in the construction schedule, they will provide flexibility to stage and sequence construction activities.

Carrying out utility relocations before the main works commence will allow for more efficient excavations, grading and foundation construction. The staging areas will need to be connected to the utility networks (water, electricity, telecommunications) as early as possible.

Closing grade crossings that are to be permanently closed at the start of the construction schedule will improve access between different areas of the project for construction traffic. This however may be constrained by diversion routes necessitated by nearby grade separation construction.

5.3 Construction Quantities

Table 5.3-1 and Table 5.3-2 below provides a summary of the major quantities anticipated in CP4. These quantities have been used to develop an opinion of probable construction sequence and duration. Refer to appendix B for the preliminary construction schedules.

Table 5.3-1
HSR Alignment Quantities

CP4	At grade (miles)	Retained Fill (miles)	Standard Viaduct (miles)	Complex Viaduct Concrete (miles)	Complex Viaduct Steel (miles)	Total Viaduct (miles)	Total (miles)
A1	9.28	-	-	-	-	-	9.28
L1	1.66	1.47	0.05	-	-	0.05	3.18
WS1	8.92	1.89	4.65	0.69	-	5.34	16.15
Total	**19.86**	**3.36**	**4.70**	**0.69**	**-**	**5.39**	**28.61**
*Rail alignment ends at stn. 6275+00 which is 1,600 ft less than package limit (6291+00)							

Table 5.3-2
Major Project Quantities

CP4	Railroad Relocations (miles)	Roadway Relocations (miles)	Roadway Under/Over-crossing Structures (Each)	Wildlife Crossings (Each)	Hydraulic Crossings (Each)	Canal Relocations (miles)
A1	-	2.2	3	32	30	0.19
L1	-	-	0	9	19	0.00
WS1	5.70	4.9	6	0	24	0.08
Total	**4.70**	**4.9**	**9**	**41**	**73**	**0.27**

5.4 Typical Construction Sequencing and Durations

The following is anticipated to be the main construction activities for CP4:

- Permanent and temporary right-of-way acquisitions by Authority.
- Contractor mobilization – Staging Area/s, Precasting Facilities and supporting offices.
- Critical area utility relocations (by contractor and/or third parties).
- Railroad relocations
- Roadway relocations.
- Canal relocations.
- Hydraulic crossings.
- Wildlife crossings.
- Berm construction.
- Demolition – buildings and roadway structures.
- HSR at-grade earthwork construction.
- HSR retained fill construction.
- HSR viaduct construction (standard and non-standard).
- Roadway overcrossing structures.
- Roadway modifications.
- Demobilization.

There are a number of variables that must be considered when planning and sequencing a construction project of this size and complexity. The contractor's preferred means and methods as well as the availability of labor, material and equipment resources will play a major part in the decision making process for sequencing the work.

The regional consultant (RC) has developed a preliminary construction schedule (see Appendix B) to determine the expected critical path activities and the overall construction duration. As discussed in 5.1, the standard viaduct construction is expected to be the driving critical path activity; however, there are a number of near critical activities including the non-standard viaducts and roadway overcrossings. The following assumptions were made in developing this preliminary construction schedule:

- All right-of-way acquisition is completed in advance of contractor on site mobilization.
- All necessary agency agreements to stage the works are in place before contractor on site mobilization, such as road closures, BNSF agreements from mainline and spur relocation and utility diversions/relocations.
- The critical third-party utility relocations are completed in advance of the main civil infrastructure works commencing and the contractor is not delayed as a result of delays to utility relocations outside of their control.
- The contractor will be able to acquire the Construction Staging Areas identified in section 3.0 and section 4.0 and take immediate possession of these temporary sites in order to efficiently sequence and construct the works.
- A Concrete Batching/Precasting Facility will be set up in Staging Area CS2 for viaduct construction in Wasco and CS3 for viaduct construction in Shafter.
- Standard viaduct superstructure will be precast segmental, while the non-standard viaduct superstructure will be CIP.
- CS1 will be used for staging the mostly at grade work in the northern section of the package.
- The critical utility relocations commence two weeks after mobilization and are completed in twelve months.
- The production rate of the standard viaduct foundation and bent construction is expected to be 4 feet/day while the production rate for the non-standard concrete structures is expected to be 2 feet/day. The RC has assumed that a single crew will construct two bents in 30 days and that there is a total of six crews working concurrently in different locations. The two non-standard elevated deck structures over BNSF will be constructed concurrently.
- The standard viaduct superstructure is expected to be precast segmental which will follow the foundation and bent construction by one month.
- The eight roadway overcrossings and one roadway undercrossing are expected to take a total of 15 months.
- No major constraints have been applied to resources.
- An alternate schedule has been provided in Appendix B which assumes four concurrent working locations for the standard concrete viaduct construction.

Section 6.0

General Construction Methods

6.0 General Construction Methods

This section presents a brief summary of the proposed construction methods for each of the components of the HSR.

6.1 Clearing and Grubbing

After mobilizing and setting up the Construction Staging Area(s), the contractor will commence with clearing and grubbing the HSR right-of-way in advance of the major building, roadway and utility relocations. This activity involves clearing natural and manmade obstacles such as trees, shrubs, signs, etc. Stripping a layer of topsoil in advance of the excavation activity may also occur at this stage.

6.2 Demolition

The next stage of construction will involve the demolition of building and roadway structures directly impacted by the HSR. Before the demolition work can commence, the building occupants and roadways will need to be relocated. There is a considerable amount of planning required in advance of commencing demolition work. A demolition survey will need to be carried out and a plan developed on how the structures will be demolished. If any hazardous materials such as asbestos are identified, a specialist will need to be brought in to remove and dispose of hazardous materials in a safe and controlled manner. Once these steps occur and the structures are ready to be demolished, the actual demolition activity can be completed expeditiously. A typical two story building can be demolished in a single day.

6.3 Earthwork

The earthwork activity involves the movement of soil from one location to another and the process of forming the soil (or earth) into a desired shape. The earthwork component of the HSR project will be extensive and involve the use of large construction machinery such as the following:

- Dozers.
- Motor graders.
- Scrapers.
- Excavators.
- Off-road earth haul units (trucks).
- On-road earth haul units (trucks).
- Water trucks.
- Earth compaction equipment.

Within the job site, earthmoving will be done using conventional methods. For very short distances (less than 300 feet), dozers will be used to shift earth. For distances from 300 feet up to 2,500 feet, scrapers will be used. For distances greater than 2,500 feet (e.g., when moving earth for underpasses and overpasses), trucks will be employed. There will be a need to import fill material as there are no cut sections on CP2-3, only excavations associated with viaduct foundation structures. The identification and acquirement of suitable borrow sites will be the contractors responsibility. The schedule and durations herein assume that suitable borrow sites will be available within a 30-mile radius of the project.

The contractor will also be responsible for the stripping and removing any unsuitable materials (contaminated and/or hazardous) which will require off-site disposal to the appropriate waste facility. See Figure 6.3-1 for the expected haul distances for various types of equipment as outlined in the Caterpillar Performance Handbook, Edition 38.

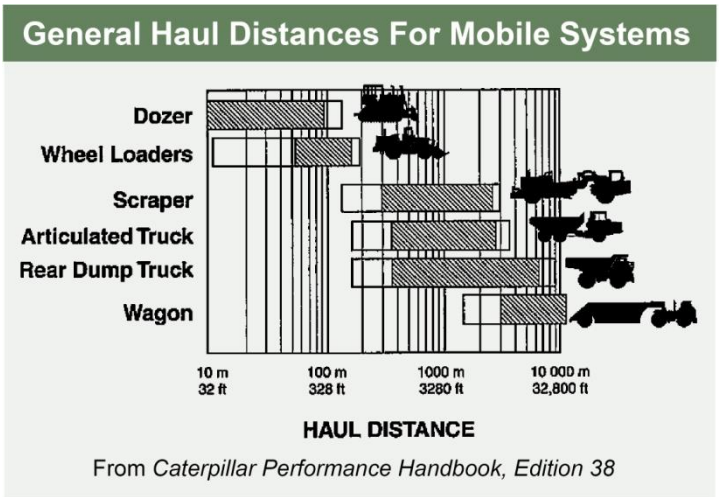

Figure 6.3-1
General Haul Distances

6.4 Highways/Roadways

The proposed HSR alignment will require road and highway realignments. Some of the realignments are associated with grade separations, and some are required due to the proposed HSR alignment. The proposed realignment or modifications are shown on the roadway plans. It is anticipated that highway and roadway work associated with the HSR Project will be done using conventional methods, in the following sequence as necessary:

- Demolition.
- Utility relocations (utility relocation timing may influence highway work schedule), which could require trenching, segmental pipe construction, concrete pipe or conduit poured in situ, storm drain catch basins poured in situ or placing precast units.
- Excavation.
- Grading.
- Placing aggregate base.
- Constructing concrete curb and gutter (in some cases may be carried out before the previous stage), which can be done by building forms and pouring concrete in place, or by using a curb and gutter placing machine.
- Placing concrete or asphalt concrete top surface base and top surfaces.

Coordination with all local agencies and California Department of Transportation (Caltrans) (for state highways) will be required as final design progresses.

6.5 Drainage

The drainage requirements of the HSR project are as follows:

- Maintain existing drainage flow patterns.
- Disperse on-site runoff to encourage local infiltration.

- Incorporate existing drainage systems.
- Improve existing drainage capacity if the HSR exacerbates existing drainage problems or flooding at a location where the existing system is known to be undersized.
- Treat runoff from pollution-generating impervious surfaces to the maximum extent practicable to meet water quality objectives and water quality standards set forth by the California Regional Water Quality Control Board (RWQCB) before discharging to receiving waters.

The at-grade or track on embankment segments will require drainage ditches or swales on both sides of the track to collect rainfall. The emphasis will be placed on on-site retention of runoff which will require the construction of detention basins. These basins will be unlined and will be designed to remove litter, settleable solids (debris), total suspended solids, and pollutants.

For embankment segments supported by retaining walls, trackbed drainage will be collected and conveyed in a pipe system. Storm drains may also be incorporated behind the top of the retaining walls to accommodate peak events. All concentrated flow will be addressed in a non-eroding manner.

Tracks set below grade or in a trench section will have drainage systems to collect stormwater and direct it to a pump station. Stormwater will be pumped to a retention basin outside the trench and released into a drainage facility.

For elevated track segments, where the HSR crosses an unpaved rural landscape, the runoff will be collected and conveyed in pipes down the sides of the pier columns to infiltration swales. Where the guideway crosses developed urban areas, the runoff will again be conveyed in pipes down the sides of the piers but usually will be discharged into the local storm water drainage system.

6.6 Structures

Refer to table 2.1-2 for a full list of all structures in CP4.

6.6.1 HSR Viaduct Structures

The HSR superstructure will be formed of decks and girders that are either precast or cast in situ. Variations in span length will be accomplished by changing mold lengths and cross sections. Although such variations will result in higher mold costs, the greatest plant investments — the lifting, transporting, and erection equipment — will be unaffected. With a wide top flange to accommodate both tracks and walkways, and near vertical webs below each track, the most economical sectional shape for a rail viaduct is a trapezoidal girder. In locations where it is not practical to use the standard box girder type, other structural types have been proposed, such as trusses, balanced cantilevers, and elevated crossover structures. For spans exceeding 200 feet, a steel truss structure is most likely to be the only option unless the track level is raised to permit much deeper balanced cantilever structures.

The Regional Consultant has identified the following complex and nonstandard structures as representative examples of the structure types within CP4 of the HSR:

- Wasco Crossover Structure.
- Shafter Crossover Structure.
- Lone Star Spur Crossing.

Analysis of nonstandard and complex structures took place at a time when the preferred route option, or Least Environmentally Damaging Alternative (LEDPA), had not yet been selected. None of the complex and nonstandard structures on the preferred alignment of CP4 were designated as structures for detailed analysis but representative structures were selected from other alignments.

The Wasco Crossover Structure is a complex section of the Wasco Viaduct where the HSR crosses over the BNSF line at a high skew. To the north and south are standard viaducts. The crossover structure is conceived as a slab supported on multiple columns to either side of the BNSF railroad corridor. The slab section is assumed to be constructed by placing precast beams across the railroad on deep in situ concrete column cap beams that run parallel to the railroad. The 6-foot-diameter columns are positioned at 30-foot centers along the length of the structure and are founded on a single 9-foot-diameter pile. Pile stiffness is described in Appendix A.

The Shafter Crossover Structure is a complex section of the Shafter Viaduct where the HSR crosses over the BNSF line at a high skew. To the north and south are standard viaducts with segments of multiple balance cantilever spans. The crossover structure is conceived as a slab supported on multiple columns to either side of the BNSF railroad corridor. The slab section is assumed to be constructed by placing precast beams across the railroad on deep in situ concrete column cap beams that run parallel to the railroad. The 6-foot-diameter columns are positioned at 30-foot centers along the length of the structure and are founded on a single 9-foot diameter pile of approximately 170 feet in depth.

Both the Wasco Crossover Structure and Shafter Crossover Structures have a maximum span of 115 feet perpendicular to the railroad and a length of the 1,326 feet and 2,240 feet, respectively.

The viaduct over the proposed Lone Star Spur Realignment is a three-span continuous concrete box girder frame and represents all continuous segments of the Shafter Viaduct. This Lone Star Spur Crossing is a complex structure because of its long span of 232 feet. The adjacent spans on either side are 145 feet and 143 feet. The structure supports two HSR tracks and is comprised of a single cell box girder with variations in depth. The depth of the superstructure is designed in compliance with the span to depth ratio presented in TM 2.3.3.

Please refer to the Draft PE4P CP4 Nonstandard and Complex Structures Report (URS/HMM/Arup 2014) for details on these complex and nonstandard structures.

There are various means and methods that the contractor can utilize to construct the HSR viaduct structures. The RC has assumed the precast segmental span by span method (PSSSM) for the standard structures in developing the preliminary construction schedule included in Appendix B. Precast I beams and CIP methods are assumed for the non-standard crossover structures over BNSF and both lifting and incrementally launching is expected for erecting the steel structures. Other methods available to the contractor are full span precast launching method (FSPLM), balanced cantilever construction (BCC) and MSS. The benefits and drawbacks of each option are discussed in the following sections of this report.

6.6.1.1 Precast Segmental Span by Span Method (PSSSM)

For this type of construction, concrete segments of 10 to 12 feet in length are precast in an offsite Precasting Facility and delivered to site by trucks using the road network or along the previously constructed deck. Span-by-Span bridges provide very high speed of construction, and can be constructed over or parallel to existing highways with little or no impact on traffic. Precast segmental bridges can be constructed using an erection truss under the segments or using an overhead erection gantry as shown in Figure 6.6-1. The spans are lifted into place, the joints are treated and the deck is post-tensioned to complete the span construction cycle. This method of construction is expected to be used for all standard spans within CP4.

Figure 6.6-1
Deep Bay Link Bridge in Hong Kong, precast segmental span by span method using overhead gantry

(Photo courtesy Arup)

6.6.1.2 BNSF Concrete Crossover Structures

These are nonstandard concrete structures that utilize precast beam to bridge over the BNSF.

The slab section is constructed from 6-foot-deep, precast, prestressed concrete I girders and supported on 12-foot-deep by 24-foot-span in situ concrete column cap beams, which run parallel to the railway. The I girders span approximately perpendicular to the BNSF tracks and are placed immediately adjacent to one-another; typically this gives a spacing of 4 feet on centers. The deck slab is 6 inches in thickness and is intended to act compositely with the beams. The superstructure has been divided into individual thermal units of approximately 150- to 200-foot length to reduce the thermal displacement and force effects. Movement between adjacent thermal units is controlled with dowelled connections, which allow relative longitudinal displacements but not relative transverse displacement.

The standard spans of the viaduct are formed from precast, prestressed box girders and seated on RC columns, which are in turn supported on a pile cap with a group of 4no. 6-foot-6-inch-diameter drilled shaft piles. Due to clearance constraints near to the BNSF right-of-way and reduced loading, the columns immediately adjacent to the crossover structure modify the general foundation arrangement by using a two-pile group with a narrower pile cap. This method of construction will expected to be used for the Conejo and Corcoran crossover structures.

6.6.1.3 Full Support Method or Cast-in-Place

Full support method/CIP is the most traditional construction method of viaduct construction. The superstructure formwork is supported directly off the ground using substantial scaffold and formwork/falsework. This type of construction is generally the slowest and most labor intensive of all viaduct construction methods. However, this method does have considerable advantages where it is not practical to construct the viaduct in sequence span by span. This method is particularly useful in localized viaduct and support structures where the economies of scale do not allow for a more efficient linear method.

Full support method/CIP is also the most flexible form of construction because the contractor can reallocate resources from one site to another and the pace of construction can be geared to the availability of resources and program priorities. This type of construction will be used for all the pile caps and columns as well as the deck for the two crossover structures mentioned above.

Figure 6.6-2
Staging and Falsework Supporting the Formwork for In Situ Construction
(Photo courtesy Taiwan High-Speed Rail Corporation [THSRC])

6.6.1.4 Incremental Launching Method

Bridge construction using the incremental launching method (ILM) is not very common in the United States. With this method of construction, the bridge is usually constructed from one side and then launched into place using mechanical jacks. It is also possible to launch from both sides of the obstacle to be crossed, but this can be more expensive due to the requirement for two sets of jacking equipment and supporting equipment or sliding bearings. This method of construction is generally very expensive due to the requirements for a considerable amount of design analysis, specialized construction equipment, and contractor knowledge/experience. However, ILM should be considered when access to a site is extremely limited or if the construction is over an environmentally protected area where other means and methods are not feasible.

ILM can be applied to bridges made of either steel or concrete. Concrete bridges built using this method are normally cast in stationary forms behind an abutment with each new segment cast directly against the preceding one. Once the concrete has cured, the entire structure is launched to create sufficient room for casting the subsequent segment. A steel bridge constructed by ILM is completely assembled (typically one segment at a time), including steel cross bracing, prior to launching.

There are two systems that the contractor can use in order to reduce the cantilever moments and the amount of deflection that occurs during launching, and sometimes both systems may be used. A tapered launching nose on the leading end of the girder can be installed to reduce the dead load of the cantilever span and to assist in lifting the mass of the girders as they are launched forward onto the landing pier. Alternatively, the contractor may elect to use a kingpost system utilizing temporary stays to reduce the deflection of the leading end of the girders during launching.

Figure 6.6-3
Incremental Launching Method Equipment Used on the Tou Chien Bridge, Second Freeway, Taiwan
(Photo courtesy Wiecon)

Refer to PE4P CP4 Draft Non-Standard and Complex Structures Report (URS/HMM/Arup Feb 2014) for more information specific to the structures in CP4.

6.6.1.5 Full-Span Precast Launching Method

FSPLM is the construction industry equivalent of just-in-time mass production. This technique requires the establishment of a dedicated fabrication yard alongside the route of the viaduct HSR where the girders are prefabricated under factory-like conditions. The girders weigh upward of 700 US tons each. The girders are cast in molds and allowed to cure, after which a completed girder is lifted from the yard onto a self-propelled traveling gantry, which travels along the already completed guideway to where the girder is to be lifted into place. This type of construction is the fastest known construction method but requires considerable up-front investment by the contractor in the fabrication yard, lifting equipment, and traveling gantries.

After the foundations and bents have been completed, the bulk of the follow-on construction activities will be at the superstructure level. The completed guideway will be the primary route for access. This form of construction is particularly suited to long continuous viaducts. There may not be enough continuous viaduct in CP4 to make this an economical option.

Figure 6.6-4
Launching/High-Speed Rail System under Construction in Taiwan, ROC pic 1
(Photo courtesy THSRC)

Figure 6.6-5
FSPLM Launching/High-Speed Rail System under Construction in Taiwan, ROC pic 2
(Photo courtesy THSRC)

6.6.1.6 Free Cantilever Method/Balanced Cantilever Construction

The free cantilever method/BCC allows the superstructure to be constructed in a segmental manner from the top of a bent. Segments can be precast off-site and brought to site on the back of a low loader, where they will be lifted in place extended outward from the bent. The size of the precast segment is usually constrained by accessibility, meaning that segments transported by road rarely exceed 10 to 12 feet in length or weigh more than 70 US tons.

Alternatively, where ground access is severely limited, the segments can be cast in situ and the formwork advanced segment by segment across the span. Segments are held in place by prestressing. Free cantilever method/BCC is particularly useful for constructing longer spans and for crossing rivers, railroads, and roadways where ground support might not be practical. CIP segmental construction is often used where nonprismatic sections are used to reduce depth (and weight) at midspan. In these situations, girder stems are often made vertical to facilitate mold depth adjustment. BCC is used in four locations along the Shafter viaduct;

- Bent 35 to 40 – sta. 5998+00
- Bent 42 to 45 – sta. 6005+00
- Bent 65 to 68 – sta. 6032+00
- Bent 109 to 113 – sta. 6106+00

Figure 6.6-6
Balanced Cantilever, STAR Light-Rail Transit, Kuala Lumpur, Malaysia
(Photo courtesy Arup)

6.6.1.7 Movable Scaffolding System/Advance Shoring System

The MSS and advance shoring system are based on a system where the main formwork is erected between two adjoining bents. The girder is then cast in place. After curing, the formwork is not dismantled but is instead pushed forward to the next span where the casting and curing is repeated. There is no need to reassemble the formwork at the next span.

The formwork is mechanically advanced and is supported at all times off the HSR structure bents. This technique is considered one of the fastest methods of in situ construction but is only economical where there is a continuous series of spans.

Figure 6.6-7
MSS in Place Awaiting In Situ Construction, Taiwan High-Speed Rail, ROC
(Photo courtesy THSRC)

Figure 6.6-8
MSS Moving Forward to the Next Span, Bent Construction Well Advanced of the Girder Placement, Taiwan High-Speed Rail, ROC
(Photo courtesy THSRC)

6.6.2 Roadway Structures

There are eight roadway overcrossing structures and one roadway undercrossing in CP4. It is anticipated that the bridges will be of standard forms commonly found on rail and highway projects.

These structures are likely to be precast concrete or preformed steel beams with a cast in place concrete deck. In order to keep existing rail services operational (where applicable), the structures may need to be partially constructed before transferring services to the new structure, demolishing the existing structure and completing the construction of the new structure.

6.6.3 Open Trench Excavation

There are no open trench sections in CP4.

6.6.4 Cut and Cover Tunnel

There are no cut and cover sections in CP4.

6.6.5 Bored Tunnels

There are no bored tunnel sections in CP4.

6.6.6 Retaining Walls

Retaining Walls will be used on the approaches to structures where there is no room for embankments. The retaining walls may be constructed using conventional CIP methods or by the

mechanically stabilized earth (MSE) method which uses precast concrete facing panels and either metal or fabric reinforcement between layers of compacted engineered fill to create embankment with vertical or near-vertical sides. Conventional CIP walls are required for HSR retained fill adjacent to systems sites.

An example of an MSE wall under construction is shown in the figure below.

Table 6.6-1
MSE Wall, Route 85/US 101 (South) Interchange Project, CA

6.6.7 Utility Relocations

The relocation of utilities requires extensive advance planning and coordination with utility owners. This is a high risk to the HSR project in terms of possible cost and schedule impacts and as a result, the PE4P design for CP4 includes the identification of utilities located within the project work area.

The most salient technical and non-technical issues anticipated involve the development of a scheduling and contracting arrangement that allows for the relocation of oil pipelines, high pressure gas lines, and a major irrigation district pumping station.

Shell Oil owns an oil pipeline along Santa Fe Way between approximate Stations 6143+00 and 6290+00 of the WS1 alignment. A significant segment of the pipeline is situated within the proposed HSR right-of-way and the remaining segment will be located within an inaccessible remnant parcel of land between the BNSF right-of-way and the proposed HSR right-of-way.

The Semitropic Water Storage District owns facilities throughout the northern project area for CP4. The CP4 project will impact a large semitropic irrigation pumping station with storage tank at approximate Station 4718+00 on the A1 alignment. The facilities to be relocated are significant. Relocation of the water storage tank in particular will include significant design and materials delivery lead times. Shutdown periods for irrigation facilities are typically limited to specific times of the year and can be limited to short durations. Accordingly, provision of temporary bypass facilities may be required during the start-up, commissioning, and switchover timeframe.

Relocation of fiber optic communication lines located within, or directly adjacent to, BNSF freight rail right-of-way also presents scheduling challenges because this work must be coordinated with both the relocation of the freight rail track and the HSR track bed construction. Fiber optic communication line relocation associated with freight rail track relocation is required between approximate Stations 5657+00 and 5829+50 on the WS 1 alignment and at miscellaneous roadway overpasses where proposed piers are within close proximity to the fiber optic lines.

There are also a number of natural gas lines, categorized as high risk that will require relocation. Gas lines requiring relocation are for the most part relatively short reaches of pipe crossing HSR or roadway grade separations of HSR. Southern California Gas (Sempra Energy) (approximately 20 locations) and Chevron each own high pressure gas lines that are impacted by the CP4 project and will require horizontal and in some cases, vertical relocation to accommodate the HSR right-of-way. It is anticipated that Sempra and Chevron will perform the final design and relocation work.

Many large diameter irrigation lines, ranging from 15-inch through 66-inch diameter, are impacted by the CP4 project. The irrigation lines are owned by the Semitropic Water Storage District, the North Kern Water Storage District, and the Shafter-Wasco Irrigation District.

Significant water mains, categorized as high risk when they are over 8 inches in diameter or operate at 80 psi or greater, exist in the cities of Wasco and Shafter. The CP4 WS1 alignment passes through both cities and will impact numerous water mains ranging from 6 inches to 18 inches in diameter. Relocation and in a number of cases encasement of water mains will be required.

Well location data has been updated using the data available as of August 2014 in the California Department of Conservation, Division of Oil, Gas, and Geothermal Resources (DOGGR) online data base (http://maps.conservation.ca.gov/doms/domsapp.html), and to further characterize the well types based on well record information in the database. There are two new water disposal wells within the permanent footprint and one new water disposal well within the temporary project footprint. In addition, there are another 14 wells that have been identified close to the project footprint that have a secondary impact as the HSR footprint impacts the existing concrete slab foundations. Of the 14 wells, 6 are active oil or gas, 3 are active water disposal and 5 are new oil or gas. An updated map book with an index coversheet showing well types and locations within the HST safety buffer zone and the 1,000-foot assessment zone as well as the WS1 footprint is included in appendix C.

6.6.8 Trackwork

The HSR track type has not yet been determined by the Authority, however, the RC does not anticipate any major constructability issues with regards to trackwork.

6.6.9 Systems

The RC is of the opinion that there are no systems sites in CP4 that have specific constructability issues. There are a number of sites that are in the vicinity of new roadway overpasses/ access roads and the clearing and grubbing of the sites would need to be coordinated with the overpass and access road construction.

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Section 7.0

Traffic Control and Detours

7.0 Traffic Control and Detours

7.1 Construction Access and Traffic

Personnel, materials, and equipment will be staged from a number of staging areas evenly spaced between Allensworth and 7th Standard Road north of Bakersfield. Staging and Skewed Crossing Laydown Areas have been identified in section 3.0, and section 4.0 and included in the environmental footprint, however, the final selection and configuration of these staging areas will ultimately be the responsibility of the contractor. To avoid logistical inconveniences for both construction crews and for the public, movements of materials and equipment will be made using the HSR right-of-way wherever practical.

Local and interstate highways will be affected by the movement of materials and equipment, and the contractor will be required to develop a Construction Transportation Plan to minimize this issue. This plan will address, in detail, the activities to be carried out in each construction phase, with the requirement of maintaining traffic flow during peak travel periods. Such activities include, but are not limited to, the routing and scheduling of materials deliveries, materials staging and storage areas, construction employee arrival and departure schedules, employee parking locations, and temporary road closures, if any. The plan will provide traffic controls pursuant to the *California Manual on Uniform Traffic Control Devices* sections on temporary traffic controls (Caltrans 2012) and will include a traffic control plan. Refer to section 3.2.2 of the Final Environmental Impact Report (FEIR) for more detail on the minimum requirements for the traffic control plan.

During the development of the FB 15% and PE4P design, the RC has been involved in high-level discussions with Caltrans and the various local jurisdictions. These discussions focused on the details of the design and did not include specific restrictions with regards to construction access and traffic control. The assumptions made in the Traffic Analysis portion of the FEIR/EIS regarding roadway overpass construction is that two consecutive overpasses would not be constructed at the same time in order to minimize traffic impacts.

Major construction traffic components are as follows:

- Import of construction materials, such as
  - Fuel, oil.
  - Water.
  - Concrete.
  - Steel.
  - Cement.
  - Aggregates.
  - Fill material.
- Mobilization/demobilization of equipment.
- Daily movements of craft labor.
- Export of earth or other unsuitable materials.

Planned traffic detours and modifications to existing traffic flows will be required for construction of roadway overpasses and for periodic hauling operations. Please refer to Section 3.2 Transportation of the FEIR/EIS for a more discussion relating to construction impacts on traffic.

The CP4 section of the HSR crosses a region with a well-defined road network, making site access easy and flexible. The job site consists of the HSR permanent right-of-way, which is typically 60 feet wide along elevated sections and 100 feet to 150 feet wide for at-grade sections. In addition, a temporary construction footprint ranging between 10 and 15 foot on either side of the alignment has been included in the environmental footprint. For safety, security, and logistics reasons, this right-of-way area will be fenced and access will be controlled. Access to the site will be via specific gates along the right-of-way, strategically located with easy access to roads and freeways.

7.2 Pedestrian Detouring and Access

As the CP4 alignment runs through the towns of Wasco and Shafter, pedestrian detouring and access will be required, however, no analysis has been undertaken to date.

Section 8.0

Construction Utilities

8.0 Construction Utilities

The Precasting and Staging Facilities require a full range of standard utilities, including construction power, potable and industrial water, communications, drainage, and sewer. Ideally, existing utilities will have sufficient capacity. In the event they are not sufficient, the site selection considers the proximity of existing utility connections.

8.1 Construction Power

The temporary construction facilities may require a significant amount of electricity depending on whether or not a new Precasting and/or Batching Facility are required. The contractor will need to work with the utility company to bring electricity to these temporary construction locations. For construction along the HSR corridor, power can be obtained by the use of temporary generators.

8.2 Construction Water

Construction water is likely to be drawn from multiple sources along the right-of-way. During the winter months, water may be collected from the ditch alongside the rail bed and impounded. Other potential water sources include temporary-permit wells, negotiated access to irrigation canals and pipelines, or water imported in trucks if necessary.

8.3 Other

In addition to construction power and water, the temporary construction facilities will require additional services such as communications, drainage and connections to the sewer network. No major constructability issues with regards to construction utilities are anticipated for CP4.

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Section 9.0

Third-Party Coordination and Agreements

9.0 Third-Party Coordination and Agreements

9.1 Utilities

Third-party coordination with utility owners within the CP4 project area has been ongoing since 2009. The PE4P coordination with agencies having facilities within CP4 consisted of requesting updated utility information focused on the preferred alignments for each of the foregoing construction packages. Data from those agencies which had responded with new or updated utility information through July 2014 was organized and inserted into the existing utility base file. Additional information which is received from agencies after July 2014 will be used to update the existing utility base file and will be tracked in a programmatic fashion. Agreements with Third-Parties are being completed by the Third-Party Coordination and Agreement team and therefore, are not discussed in this report.

Initial utility coordination meetings will be convened when necessary with those agencies having significant utilities within the project area and who also consent to such a meeting. Local agency meetings will be arranged on a prioritized basis, focused on those agencies willing to meet with the regional consultant (RC) and owning the most consequential facilities within the CP4 project area. For agencies which do not have utilities within the CP 2-3 project area, but do own infrastructure within the CP4 project area, the initial meetings will be both introductory in nature and will also seek to confirm areas of infrastructure impacts due to HSR CP4 and receive comment on proposed dispositions for impacted utilities. Meetings with agencies which have had previous interaction with the RC during development of the CP4 PE4P drawings will be convened where appropriate to review proposed utility dispositions.

Concept level utility relocation plans are not being developed for CP4.

The PMT coordinates and negotiates Master Agreements with local agencies owning utilities within the HSR project area. The agreements, commonly referred to as Third-Party Agreements, provide a vehicle for reimbursement to affected agencies for costs to respond to requests for existing utility mapping, meetings to review agency standards and proposed utility relocation plans (CP 2-3), and where applicable, for local agency staff to assist in development of the relocation plan details. Refer to appendix E for a table showing third-party coordination undertaken to date.

9.2 Railroads

Limited coordination has taken place between the RC and the UPRR and BNSF railroads over the past six months. Some of the main constraints on the FB 15% design that came out of discussions between the Authority's representatives and the railroad companies are as follows:

- Required distance of HSR from existing UPRR and BNSF alignments.
- Definition of operational right-of-way.
- Requirement for shooflys and underbridges.
- Relocations within railroad right-of-way.
- Spur tracks.

9.3 Local Jurisdictions

Throughout the development of the 15% Design and the FEIR/EIS, there has been interaction with the local jurisdictions from Fresno to Bakersfield. The RC has reviewed and incorporated local criteria into the roadway design as well as input/feedback received from the agencies on the proposed design. The RC, to the maximum extent possible, has incorporated the agency comments into the 15% Design. Where the design does not meet the local criteria, the RC has prepared a Design Exception for submittal to the local agency.

9.4 State Agencies

Based on directions received by the Authority, all coordination with Caltrans will be deferred to the design builder for CP4. The RC is only assisting in providing information needed by the environmental team in order to prepare the draft EIR/EIS for CP4. The RC prepared an assessment of high-speed rail impacts on Caltrans facilities within CP4 in mid-July 2014 to support preparation of a final EIR/EIS for CP4. The RC prepared an assessment of high-speed rail impacts on Caltrans facilities within CP4 in mid-July 2014 to support preparation of a draft Caltrans Environmental Document for CP4.

Section 10.0

Potential Excavation Hazards

10.0 Potential Excavation Hazards

10.1 Flammable Gasses and Hydrocarbons

The geotechnical investigations to date have not uncovered any excavation hazards related to flammable gasses and/or hydrocarbons.

10.2 Cobbles and Boulders

The geotechnical investigations to date have not uncovered any excavation hazards related to cobbles and boulders.

10.3 Tunneling through Fault Zones

There are no tunnels in CP4.

10.4 Contamination

The PE4P ground investigation (GI) does not include an environmental evaluation of alignment for contaminated soils or groundwater. Neither contaminated soils nor contaminated groundwater were encountered during the GI for CP4; however, because the project alignment follows existing freeway and railroad corridors, portions of which are heavily industrialized, the Contractor shall expect to encounter surficially contaminated soils along these corridors during excavation and dispose of them in accordance with all regulatory requirements. Please refer to the FB FEIR/EIS for discussion on potential environmental contamination.

10.5 Obstructions

The geotechnical investigations to date have not uncovered any excavation hazards related obstructions.

10.6 Existing Openings

The geotechnical investigations to date have not uncovered any excavation hazards related to existing openings.

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Section 11.0

Right-of-Way Acquisition

11.0 Right-of-Way Acquisition

The footprint of the HSR was used to assess the right-of-way impacts and consists of the HSR track corridor, systems sites, maintenance of infrastructure facilities, and associated roadway relocations and crossings. There are both permanent and temporary right-of-way impacts associated with the HSR. Temporary and permanent easements occur in areas outside of the permanent right-of-way for the project that are required for construction. These areas may include utility relocations, contractor staging areas, or work to conform to existing private facilities.

11.1 Summary of Right-of-Way Design

Permanent impacts occur within the project's permanent right-of-way, which includes aerial, at-grade, and depressed tracks; roadways; stations; traction power substations; radio communication sites; maintenance of infrastructure facilities; and a HMF. The footprint for the track is defined as 60 feet wide in aerial sections; however, certain complex structures require up to 300 feet in permanent right-of-way. For the at-grade sections, the footprint varies between 100 feet and 150 feet wide, depending on the height of the fill required. The footprints for the roadways are defined by the outer limits of the embankments or cuts of the grade separations plus areas needed for drainage detention basins. The areas denoted as HSR stations are included in the footprint.

The RC gathered existing right-of-way information from the counties within this section from the digital assessor's parcel map data, specifically the assessor's parcel number and the parcel size. The parcel information and HSR footprint were displayed in a geographic information system format, and the overlapping area was recorded as the necessary right-of-way for the CP4 alignment.

The majority of parcels will require a partial acquisition of their total area, resulting in a remainder that is not needed for the project. In some cases, a full acquisition of the parcel was determined to be necessary. This will be the case if the RC observed that either (a) the remainder is not a viable economic unit that retains its highest and best use or (b) the impact to remaining land and improvements is too great to continue to function. In other cases, damages to an area of a parcel were determined to be necessary. An area was classified to be damaged if the RC observed that there will be no legal access, in addition to the criteria used for full acquisitions.

A summary of land and improvement base unit values, denoted by parcel land use classifications, is included Table 11.1-1 which was taken from the 15% RS Right-of-Way Requirements Report (URS/HMM/Arup 2014).

Table 11.1-1
Parcel Land Use Classifications Base Value Information

Classification	Description	Size	Unit Value		
			($/ac)	Site Improvements	Severance
Land Only					
A1, A1.1	Ag w/ & w/o Imp	<10 Ac	$35,000	20%	40%
		>10 Ac	$25,000	20%	40%
	Ag Farm Ind	All	$100,000	10%	40%
A1 & A1.1 Blend	HMF and Mainline Through HMF Site	All	$54,950	20%	20%
C1, C1.1, O1, O1.1, M	Com, Office, & Motel w/ & w/o Imp	<0.75 Ac	$900,000	20%	10%
		0.75–2.00 Ac	$525,000	20%	10%
		>2.00 Ac	$435,000	20%	10%
I1,I1.1,I2,I2.1	Light & Heavy Ind w/ & w/o Imp	<5 Ac	$305,000	15%	10%
		>5 Ac	$250,000	15%	10%
R1, R1.1	SF Residential w/ & w/o Imp	All	$200,000	25%	20%
R2, R2.1	MF Residential w/ & w/o Imp	All	$250,000	25%	20%
MH	Mobile Home Park	All	$1,000,000	20%	10%
OS	Open Space/Park	All	$350,000	—	20%
P	Pasture/Fallow	All	$20,000	—	10%
IMPROVEMENTS ONLY					
I1.1 & I2.1	Ind Buildings	All	$50/ft^2 plus or minus*		
C1.1 & O1.1	Com Buildings	All	$75/ft^2 plus or minus*		
A1.1 & R1.1, R2.1, MH	Res Improvements	All	Lump Sum Based on Comparable Listings		

*Cost was adjusted for quality, condition, and age of the improvement.

Ag = agricultural
Imp = improvements
Ind = industrial
MF = multifamily
Com = commercial
HMF = Heavy Maintenance Facility
Res = residential
SF = single family

11.2 Right-of-Way Impact Summary

The RC tabulated the total area in acres of estimated right-of-way impacts, including full and partial takes, by land use classification, HSR alignment, and proposed use within the CP2-3 alignment. The Record Set 15% Preliminary Right-of-Way Requirements Report estimated temporary easements and permanent right-of-way area and cost. A summary of this information is shown in Table 11.2-1 Back-up files, in geographic information system format, are available to support the following information.

Table 11.2-1
CP4 Right-of-Way Impact Summary

	Cost (in Millions)		Acres		
Alignment	**Right-of-Way**	**Temporary Easements**	**Right-of-Way**	**Easements**	**Number of Parcels**
A1	$9.59	$0.00	273	0	37
L1	$6.76	$0.65	106	27	11
WS1	$91.94	$11.52	556	263	164
Totals	**$108.29**	**$12.17**	**934**	**290**	**212**

* Based on the January 2014 Record Set 15% Preliminary Right-of-Way Requirements Report.

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Section 12.0

Groundwater Management

12.0 Groundwater Management

The groundwater region that the HSR alignment passes through is known as the Tulare Lake Hydrologic Region. The hydrologic region is characterized by groundwater conditions that are artificially lowered, locally variable in quality and depth groundwater conditions and subject to increasing usage demands. Groundwater levels fluctuate with seasonal rainfall, withdrawal, and recharge. The large demand for groundwater has caused subsidence in some areas of the Valley, primarily along its western side and southern end (California Department of Water Resources [CDWR] 2003). Depth to groundwater in the SJV ranges from a few inches to more than 300 feet. "The project study area is within the SJV Groundwater Basin and crosses through five of its seven sub-basins: Kings, Tulare Lake, Kaweah, Tule, and Kern" (URS/HMM/Arup 2012).

12.1 Site Investigation

The PE4P GI for CP4 was conducted between August 19 and November 13, 2013, and consisted of drilling 20 rotary-wash boreholes and performing 45 CPTs. Soil samples were collected from boreholes at 5-foot intervals using standard penetration test (SPT) split spoon samplers and California Modified samplers driven with automatic hammers. Energy calibration tests were performed on the automatic hammers used during the exploration program, and SPT N-values were recorded and corrected accordingly. The explorations' names and locations relative to the alignment are presented in Table 12.1-1.

Table 12.1-1
Locations of PE4P Ground Investigation Tests Relative to Proposed Alignments

Exploration ID	Alignment Alternative	Structure ID	Distance along CP4, north to south (miles)	Offset Distance from Alignment, (feet)[a]	Elevation (ft) (NAVD 88)
S0243CPT	A1	At-Grade 1	0.83	950	219.3
S0246CPT	A1	At-Grade 1	1.82	-167	220.6
S0249CPT	A1	At-Grade 1	2.75	-1,643	227.2
S0074R	A1	At-Grade 1	2.87	28	229.6
S0248CPT	A1	At-Grade 1	2.93	847	229.5
S0252CPT	A1	At-Grade 1	5.48	2,048	245.3
S0254CPT	A1	At-Grade 1	6.42	-149	257.9
S0075R	A1	At-Grade 1	6.43	-169	257.9
S0076R	A1	At-Grade 1	7.63	-34	269.7
S0257CPT	A1	At-Grade 1	7.63	98	270.0
S0260ACPT	A1	At-Grade 1	8.94	3,163	277.9
S0261CPT	L1	At-Grade 2	9.20	2,484	285.6
S0262CPT	L1	At-Grade 2	9.63	2,025	292.7
S0263CPT	L1	Retained Embankment 1	9.81	1,663	295.1
S0264CPT	L1	Retained Embankment 1	10.12	1,193	299.1
S0077R	L1	Retained Embankment 1	10.28	10	299.0
S0078R	L1	Retained Embankment 2	10.59	693	306.0

Exploration ID	Alignment Alternative	Structure ID	Distance along CP4, north to south (miles)	Offset Distance from Alignment, (feet)[a]	Elevation (ft) (NAVD 88)
S0266CPT	L1	Retained Embankment 2	10.80	578	307.3
S0267CPT	L1	Retained Embankment 2	11.29	-37	304.4
S0079R	L1	At-Grade 3	11.30	-61	304.6
S0270CPT	L1	At-Grade 3	11.53	263	310.2
S0268ACPT	L1	At-Grade 3	11.78	213	310.1
S0080R	WS1	At-Grade 4	12.32	162	312.3
S0269CPT	WS1	At-Grade 4	12.32	214	312.6
S0271CPT	WS1	At-Grade 4	12.78	212	317.6
S0272CPT	WS1	At-Grade 4	13.31	225	320.6
S0081R	WS1	At-Grade 4	13.69	174	320.7
S0273CPT	WS1	At-Grade 4	13.69	229	320.8
S0274CPT	WS1	At-Grade 4	13.80	-1,833	317.6
S0082R	WS1	Retained Embankment 3	14.88	-461	328.3
S0279CPT	WS1	Retained Embankment 3	14.88	-463	328.3
S0280CPT	WS1	Structure 3	15.23	-48	331.4
S0282CPT	WS1	Structure 3	15.48	-36	331.0
S0283CPT	WS1	Structure 3	15.78	-48	332.0
S0083R	WS1	Structure 3	15.79	-93	331.9
S0285ACPT	WS1	Structure 3	16.30	-81	334.0
S0287CPT	WS1	Structure 3	16.81	356	337.1
S0084R	WS1	Structure 3	16.81	343	337.1
S0289CPT	WS1	Structure 3	17.17	-72	337.2
S0290ACPT	WS1	At-Grade 5	17.79	-36	332.8
S0084AR	WS1	At-Grade 5	17.79	-35	332.8
S0292CPT	WS1	At-Grade 6	18.85	-1,104	346.9
S0085R	WS1	At-Grade 6	20.00	-291	345.0
S0295CPT	WS1	At-Grade 6	20.00	-295	346.9
S0086R	WS1	At-Grade 6	20.98	-296	344.7
S0297CPT	WS1	At-Grade 6	20.99	75	345.9
S0087R	WS1	At-Grade 6	21.67	18	346.6
S0301CPT	WS1	At-Grade 6	21.69	6	346.6
S0302CPT	WS1	Retained Embankment 5	21.94	-206	346.1
S0303CPT	WS1	Retained Embankment 5	22.30	-224	347.6
S0304CPT	WS1	Structure 5	22.75	-33	345.4
S0088R	WS1	Structure 5	23.04	29	344.6

Exploration ID	Alignment Alternative	Structure ID	Distance along CP4, north to south (miles)	Offset Distance from Alignment, (feet)[a]	Elevation (ft) (NAVD 88)
S0305CPT	WS1	Structure 5	23.08	7	344.5
S0308CPT	WS1	Structure 5	23.34	-330	343.7
S0309CPT	WS1	Structure 5	23.77	84	346.1
S0088AR	WS1	Structure 5	24.48	-47	346.1
S0312CPT	WS1	Structure 5	24.48	-33	346.2
S0314CPT	WS1	Structure 5	25.15	-32	343.7
S0315CPT	WS1	Retained Embankment 6	25.58	172	343.4
S0089R	WS1	Retained Embankment 6	25.86	-71	341.8
S0317CPT	WS1	Retained Embankment 6	25.99	133	341.6
S0318ACPT	WS1	At-Grade 7	26.66	60	336.3
S0090R	WS1	At-Grade 7	27.50	21	337.4
S0318CPT	WS1	At-Grade 7	27.88	23	338.7
S0319CPT	WS1	At-Grade 7	28.09	25	339.7
S0091R	WS1	At-Grade 7	28.42	-82	340.4

[a] Positive offsets from the alignment are to the left (generally east) of the alignment with increasing station (progression southward). Negative offsets are to the right of the alignment (generally west).

12.2 CP4 Groundwater Levels

Baseline design and construction groundwater levels are provided in Table 12.2-1. Design groundwater levels represent projected long-term levels for the design of permanent structures and allow for the potential reestablishment of historically high levels. Construction groundwater levels represent recent levels as observed during the PE4P GI.

Table 12.2-1
Baseline Groundwater Levels for Design and Construction

Starting	Ending	Design Groundwater Baseline Depth (ft)	Construction Groundwater Baseline Depth (ft)
Start of CP4	Approaching Woollomes Avenue	10	20
Woollomes Avenue	Approaching Taussig Avenue	50	75
Taussig Avenue	End of CP4	80	125

Shallower, perched groundwater will occur in the interbedded soils encountered along CP4. Open water retention/percolation ponds also exist along the alignment and in some cases lie directly within the proposed footprint of the alignment.

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Section 13.0

Construction Pollution Control

13.0 Construction Pollution Control

13.1 Air Quality

Section 3.3 of the FB FEIR/EIS describes the regulatory and environmental setting associated with the air quality and global climate changes for the study area affected by the HSR project, the potential impacts on air quality and global climate change that would result from the project, and mitigation measures that would eliminate or reduce these impacts.

A total of 19 Air Quality Impacts are identified in the FEIR/EIS. They are as follows:

- Impact AQ #1 – Common Regional Air Quality Impacts During Construction.
- Impact AQ #2 – Compliance with Air Quality Plans.
- Impact AQ #3 – Material-Hauling Emissions Outside of SJVAB.
- Impact AQ #4 – Greenhouse Gas Emissions During Construction.
- Impact AQ #5 – Asbestos and Lead-based Paint Exposure During Construction.
- Impact AQ #6 – Localized Air Quality Impacts During Guideway/Alignment Construction.
- Impact AQ #7 – Localized Air Quality Impacts on Schools and Other Sensitive Receptors During Construction.
- Impact AQ #8 – Localized Air Quality Impacts from Concrete Batch Plants.
- Impact AQ #9 – Localized Air Quality Impacts from HMF and Maintenance of Way Facility Construction.
- Impact AQ #10 – Regional Criteria Pollutant Emissions.
- Impact AQ #11 – Greenhouse Gas Analysis During Operation.
- Impact AQ #12 – Localized Air Quality Impacts During Train Operations.
- Impact AQ #13 – Localized Mobile Source Air Toxics Analysis.
- Impact AQ #14 – Microscale CO Impact Analysis.
- Impact AQ #15 – Localized PM_{10}/$PM_{2.5}$ Hot-Spot Impact Analysis.
- Impact AQ #16 – Localized Analysis of HMF Impacts.
- Impact AQ #17 – Localized Air Quality Impacts on Sensitive Receptors Including Schools.
- Impact AQ #18 – Odor Impacts from Operations.
- Impact AQ #19 – Compliance with Air Quality Plans.

Below is an extract from the FB FEIR/EIS which outlines the mitigation measures that the contractor must follow during construction (Authority and FRA 2014).

AQ-MM#1: Reduce Criteria Exhaust Emissions from Construction Equipment. This mitigation measure will apply to heavy-duty construction equipment used during the construction phase. All off-road construction diesel equipment will use the cleanest reasonably available equipment (including newer equipment and/or tailpipe retrofits), but in no case less clean than the average fleet mix, as set forth in CARB's OFFROAD 2011 database, and no less than 40% reduction compared to a Tier 2 engine standard for NO_x emissions. The contractor will document efforts it undertook to locate newer equipment (such as, in order of priority, Tier 4, Tier 3 or Tier 2 equipment) and/or tailpipe retrofit equivalents. The contractor shall provide documentation of such efforts, including correspondence with at least two construction equipment rental companies. A copy of each unit's certified tier specification and any required CARB or SJVAPCD operating permit will be made available at the time of mobilization of each piece of equipment. The contractor shall keep a written record (supported by equipment-hour meters where available) of equipment usage during project construction for each piece of equipment.

AQ-MM#2: Reduce Criteria Exhaust Emissions from On-Road Construction Equipment. This mitigation measure applies to all on-road trucks used to haul construction materials, including fill, ballast, rail ties, and steel. Material hauling trucks will consist of an average fleet mix of equipment model year 2010, or newer, but no less than the average fleet mix for the current calendar year as set forth in CARB's EMFAC 2011 database. The contractor shall provide documentation of efforts to secure such fleet mix. The contractor shall keep a written record of equipment usage during project construction for each piece of equipment.

AQ-MM#3: Reduce the Potential Impact of Concrete Batch Plants. Concrete batch plants will be sited at least 1,000 feet from sensitive receptors, including daycare centers, hospitals, senior care facilities, residences, parks, and other areas where people may congregate. The concrete batch plant will utilize typical control measures to reduce the fugitive dust, such as water sprays, enclosures, hoods, curtains, shrouds, movable and telescoping chutes, central dust collection systems and other suitable technology, to reduce emissions to be equivalent to the U.S. EPA AP-42 controlled emission factors for concrete batch plants.

13.2 Noise and Vibration

The noise and vibration limits chosen for construction and operation of the HSR System satisfy the federal guidelines of the FRA and Federal Transit Administration (FTA) for train and HSR facility operations and Federal Highway Administration (FHWA) as defined for California application by Caltrans for traffic noise.

The construction noise analysis included in section 3.4.5.3 of the FEIR/EIS suggests that the potential for construction noise impacts will be minimal for commercial and industrial land use, with impact screening distances of 79 feet and 45 feet, respectively. For residential land use, the potential for temporary construction noise impacts would be limited to locations within approximately 141 feet of the alignment. However, the potential for noise impacts from nighttime construction could extend to residences as far as 446 feet. These impacts are temporary during construction. Under these conditions potential noise effects would have moderate intensity under the National Environmental Policy Act (NEPA) and impacts would be significant under the California Environmental Quality Act (CEQA).

During construction, some equipment may cause ground-borne vibrations, most notably pile-driving equipment. Pile-driving is only expected to occur where there is the need for a bridge, aerial structure, or road crossing; and is only one of the several proposed construction methods. Construction equipment can produce vibration levels at 25 feet that range from 58 VdB for a small bulldozer to 112 VdB for a pile driver. With pile driving, there is potential for severe vibration impacts during construction that would have substantial intensity under NEPA and would be significant under CEQA. Without pile driving, the impact would have moderate intensity under NEPA and would be less than significant under CEQA.

A total of 6 noise and vibration (N&V) impacts are identified in the FEIR/EIS. They are as follows:

- Impact N&V #1 - Construction Noise.
- Impact N&V #2 - Construction Vibration.
- Impact N&V #3 - Moderate and Severe Noise Impacts from Project Operation to Sensitive Receptors.
- Impact N&V #4 - Noise Effects on Wildlife and Domestic Animals.
- Impact N&V #5 – Impacts from Project Vibration.
- Impact N&V #6 - Traffic Noise.

The Authority and the FRA have considered avoidance and minimization measures consistent with the Statewide and Bay Area to Central Valley Program FEIR/EIS commitments. FTA and FRA have guidelines for minimizing noise and vibration impacts at sensitive receptors that need to be followed during construction. In addition, various mitigation measures are identified in section 3.4.7 of the FEIR/EIS to compensate for impacts that cannot be minimized or avoided. Below is an extract from the FEIR/EIS which outlines the mitigation measures that the contractor must follow during construction.

N&V-MM#1: Construction noise mitigation measures. Monitor construction noise to verify compliance with the noise limits. Provide the contractor the flexibility to meet the FRA construction noise limits in the most efficient and cost-effective manner. The contractor would have the flexibility of either prohibiting certain noise-generating activities during nighttime hours or providing additional noise control measures to meet the noise limits. To meet required noise limits, the following noise control mitigation measures will be implemented as necessary, for nighttime and daytime:

- Install a temporary construction site sound barrier near a noise source.
- Avoid nighttime construction in residential neighborhoods.
- Locate stationary construction equipment as far as possible from noise-sensitive sites.
- Re-route construction truck traffic along roadways that will cause the least disturbance to residents.
- During nighttime work, use smart back-up alarms, which automatically adjust the alarm level based on the background noise level, or switch off back-up alarms and replace with spotters.
- Use low-noise emission equipment.
- Implement noise-deadening measures for truck loading and operations.
- Monitor and maintain equipment to meet noise limits.
- Line or cover storage bins, conveyors, and chutes with sound-deadening material.
- Use acoustic enclosures, shields, or shrouds for equipment and facilities.
- Use high-grade engine exhaust silencers and engine-casing sound insulation.
- Prohibit aboveground jackhammering and impact pile driving during nighttime hours.
- Minimize the use of generators to power equipment.
- Limit use of public address systems.
- Grade surface irregularities on construction sites.
- Use moveable sound barriers at the source of the construction activity.
- Limit or avoid certain noisy activities during nighttime hours.

To mitigate noise related to pile driving, the use of an auger to install the piles instead of a pile driver would reduce noise levels substantially. If pile driving is necessary, limit the time of day that the activity can occur.

N&V-MM#2: **Construction vibration mitigation measures**. Building damage from construction vibration is only anticipated from impact pile driving at very close distances to buildings. If pile driving occurs more than 25 to 50 feet from buildings, or if alternative methods such as push piling or auger piling can be used, damage from construction vibration is not expected to occur. Other sources of construction vibration do not generate high enough vibration levels for damage to occur. Typically, once a construction scenario has been established, preconstruction surveys are conducted at locations within 50 feet of pile driving to document the existing condition of buildings in case damage is reported during or after construction. Damaged buildings would be repaired or compensation paid.

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Section 14.0

Design and Construction Permits

14.0 Construction Permits

14.1 National or Regionally Significant Projects

On March 22, 2012, the President signed an Executive Order 13604 "Improving Performance of Federal Permitting and Review of Infrastructure Projects." This executive order created an inter-agency initiative, spearheaded by the Office of Management and Budget, to institutionalize best practices to reduce the amount of time required to make permitting and review decisions and to improve environmental and community outcomes.

On September 21, 2012, as part of his We Can't Wait initiative, President Barack Obama announced the following two nationally and regionally significant surface transportation projects in California:

- California High-Speed Rail – Central Valley Construction.
- San Francisco Downtown Ferry Terminal.

As a result of the President's executive order, federal agencies have identified a set of best practices for efficient review and permitting that range from expanding information technology (IT) tools to strategies for improving collaboration, such as having multiple agencies review a project concurrently, rather than sequentially. These best practices were institutionalized in the Presidential Memorandum on May 17, 2013, directing all relevant agencies to put these practices into effect. Refer to the Federal Infrastructure Projects Permitting Dashboard for more information and the tools available (Federal Infrastructure Projects Permitting Dashboard 2014).

The following sections provide discussion on design and construction permits. Refer to the FB RS 15% Design Baseline Report (URS/HMM/Arup June 2014) for additional discussion on environmental permits.

14.2 Design and Construction Permits

14.2.1 Geotechnical Permits

Geotechnical exploration permitting generally falls in two geographical categories: (1) permits for geotechnical exploration within waters of the U.S. and/or waters of the state (jurisdictional waters), and (2) those outside of jurisdictional waters. Permits for drilling in areas outside of jurisdictional waters are usually obtained from the local jurisdiction's (city, county) environmental health department to drill a boring. Permits to encroach on public road rights-of-way should be obtained from the municipality, county, or Caltrans, as appropriate, but usually can be included under general contractors' construction plans for encroachment.

Permits for drilling in areas within jurisdictional waters are usually obtained from the U.S. Army Corps of Engineers, utilizing a Nationwide Permit 6 (with no reporting requirements) and a Section 401 Certification to the Regional Water Quality Control Board or State Water Resources Control Board for review and certification.

For any drilling campaign, permits could be required by some or all of the agencies listed below:

- U.S Army of Corps of Engineers.
- California Department of Fish and Wildlife.
- U.S. Fish and Wildlife Service.
- Regional Water Quality Control Board.
- State Water Resources Control Board (SWRCB).

- County well permits (mandatory when subsurface drilling likely to intersect a saturated zone is required).
- Local jurisdiction encroachment permits.

These permits have reporting requirements, including preparation of permit applications by qualified natural and cultural resource specialists identifying potential impacts and/or developing appropriate avoidance and minimization measures. Following the submittal of permit applications, an application may take between 30 and 180 days to obtain depending on the agency and the permit.

Overall, geotechnical exploration activities to be performed by the contractor are expected to be conducted in areas for which project environmental clearances have been documented in the FEIR/EIS and associated decision documents (CEQA Notice of Determination and NEPA Record of Decision) for the FB Section.

14.2.2 Working in or Near Waterways

14.2.2.1 Best Management Practices

Best management practices (BMPs) can be utilized during different phases of the project. During construction, BMPs can be used to mitigate construction activities contributing to stormwater pollution. BMPs can also remove pollutants resulting from the O&M of a new project. More information on BMPs is available in the *California Stormwater Best Management Practice Handbook for Construction* (California Stormwater Quality Association [CASQA] 2003).

14.2.2.2 Construction Considerations

The construction site will be subject to the statewide National Pollutant Discharge Elimination general permit for construction activities, SWRCB Order No. 2009-0009-DWQ, and successor permits. Construction site BMPs will be selected and monitored in accordance with the Stormwater Pollution Prevention Plan (SWPPP) filed for the project by the contractor. The construction site BMPs will be selected based on established criteria and design guidelines outlined in either the Caltrans Stormwater Quality Handbook or the CASQA California Stormwater Quality Best Management Practice Handbook.

Construction activity may generate dewatering needs. To the extent practical, permanent retention facilities and other applicable drainage and stormwater facilities may be constructed in the early stages so as to serve as the discharge point for dewatering activities. The goal is to fully retain the dewatering activities within these retention facilities. However, to the extent dewatering activity discharges exceed the capacity of the retention facilities or are required to be directly discharged into surface water, the contractor will be subject to the monitoring and effluent discharge requirements set forth by the RWQCB, Central Valley Region Order No. R5-2008-0081. If so subject, the contractor will be required to prepare and submit a Pollution Prevention and Monitoring and Reporting Plan and a Notice of Intent to RWQCB for approval.

14.2.2.3 Monitoring

During construction, a SWPPP and monitoring program will be performed with collected data submitted to RWQCB in compliance with the General Construction Permit. The overall objectives of the monitoring program are to monitor stormwater constituents of concern per the General Construction Permit as determined by project risk assessment level.

If dewatering is required and discharges into surface waters are found to be unavoidable, the contractor will be subject to the monitoring and effluent discharge requirements set forth by the RWQCB, Central Valley Region, and Order No. R5-2008-0081. If so subject, the contractor will be required to prepare and submit a Pollution Prevention and Monitoring and Reporting Plan and a Notice of Intent to RWQCB for approval. If it is found necessary for HMFs to discharge to surface waters, these facilities will be subject to permitting under the SWRCB General Permit No. CAS000001 (industrial activities), as a transportation facility that conducts vehicle maintenance. Coverage under this permit would require preparation of a site-specific SWPPP and annual monitoring/reporting.

14.2.2.4 Pollutant Removal

Pollutant removal will be accomplished using treatment BMPs designed to remove pollutants from stormwater runoff prior to discharging (directly or indirectly) to receiving waters. Caltrans requires that permanent treatment BMPs be considered for all new construction and major reconstruction projects. Selection of treatment BMPs for the HSR will be based on the *Project Planning and Design Guide* (Caltrans 2010).

Typically, a project must consider treatment for a targeted design constituent (TDC) when an affected water body within the project limits is on the Clean Water Act Section 303(d) list of impaired water bodies for one or more of the Section 303(d)-)–listed water quality parameters. A parameter meeting this condition is known as a primary pollutant of concern. TDCs identified in the *Project Planning and Design Guide* include phosphorus, nitrogen, total and dissolved copper, total and dissolved zinc, total and dissolved lead, and sediments. TDCs also include a category known as general metals, which include cadmium, nickel, chromium, and other trace constituents (such as selenium and arsenic).

Table 14.2-1 provides a preliminary list of permits, approvals, consultations, and agreements that may need to be in place prior to construction.

Table 14.2-1
Preliminary List of Design and Construction Permits, Consultations, and Requirements[1]

No.	Jurisdictional Agency	Code, Reg, Std or Guideline	Notes
Federal Agencies			
1	Federal Railroad Administration	NEPA Department of Transportation Act Sections 4(f) and 6(f) 49 CFR Part 200-299	• Lead federal agency responsible for implementation of NEPA, and coordination with other federal agencies. • Responsible for coordination with federally recognized tribes under NHPA Section 106. • Responsible for use determinations for project impacts on properties protected under Section 4(f) or 6(f). Project designed to avoid use wherever feasible.
2	Advisory Council on Historic Preservation	NHPA Section 106	Oversees compliance with NHPA; elected to participate as a signatory to the FB Section Memorandum of Agreement, per Section 106.
3	Department of Homeland Security	N/A	N/A
4	Federal Aviation Administration	14 CFR 77.24 (aka Part 77)	Air space clearance for air craft facilities (e.g., landing strips, heliports)
5	Federal Communications Commission	47 CFR 17.7	Manages antenna structure registration, including for stand-alone radio sites for HSR - requires TOWAIR analysis.
6	Federal Emergency Management Agency	N/A	N/A
7	National Marine Fisheries Service	Federal Endangered Species Act	The FRA has determined that there is no jurisdiction for the National Marine Fisheries Service in the FB Section.
8	Natural Resources Conservation Service	NRCS-CPA-106	N/A

No.	Jurisdictional Agency	Code, Reg, Std or Guideline	Notes
9	U.S. Army Corps of Engineering	• Federal Clean Water Act, Section 404 (Nationwide Permit and Individual Permit) • Rivers and Harbors Act, Section 408	• Oversees and issues permits governing projects that dredge or fill waters of the U.S. • Makes major or minor Section 408 determinations for projects that affect flow in waterways.
10	U.S. Environmental Protection Agency, Region 9	Federal Clean Air Act, Section 176(c)(4)	Oversees completion of the United States Environmental Protection Agency General Conformity Determination process. Party to the Checkpoint C MOA among Authority, FRA, USACE, and EPA.
11	U.S. Fish and Wildlife Service, Region 8	Federal Endangered Species Act	Implementation of avoidance and minimization measures to avoid take of the species. Otherwise requires preparation of a Biological Assessment and request incidental "take" authorization under Section 7 of the federal Endangered Species Act. Initiation of consultation to be requested by FRA. The U.S. Fish and Wildlife Service prepared and issued a Biological Opinion in April 2014.
State Agencies			
12	California High-Speed Rail Authority	CEQA	Lead state agency responsible for implementation of CEQA for the HSR System, and responsible for coordination with other state and federal agencies.
13	California Air Resources Board	• Indirect Source Review (ISR) • Voluntary Emissions Reduction Agreement (VERA)	• Responsible for completing project ISR. • Administers VERA program
14	California Department of Conservation	Williamson Act Properties Government Code §§51290 - 51295 and 51296.6	Requires notification of project effects on Williamson Act contracts.

No.	Jurisdictional Agency	Code, Reg, Std or Guideline	Notes
15	California Department of Fish and Wildlife, Region 4	• California Endangered Species Act (CESA) • California Fish and Game Code Section 2081 – Incidental Take Permit • Title 14 Memorandum of Agreement • California Fish and Game Code Section 1602 – Streambed Alteration Agreement Programmatic Permit	• Administers CESA • Reviews applications and issues Incidental Take Permit and incidental "take" authorization. Reviews applications and issues Streambed Alteration Agreement programmatic permits
16	Department of Transportation, District 6	Highway Design Manual	Prepare project reports and fact sheets for intersection of HSR with state highway facilities; obtain encroachment permits for activity within Caltrans right-of-way.
17	California Public Utilities Commission	• General Orders • Application to Construct	• Establishes design and safety requirements for electric utilities • Approves construction of new/modification of existing high-voltage power lines
18	California State Water Resources Control Board / Central Valley Regional Water Quality Control Board	• Federal Clean Water Act: Section 401 - State Water Quality Certification • Section 402 – NPDES Permit (Construction General Permit and Municipal Separate Storm Sewer Permit • Porter Cologne Act, Central Valley Basin Plan	• In partnership with the Central Valley Regional Water Quality Control Board, SWRCB issues Water Quality Certification's • Administers National Pollutant Discharge Elimination (NPDES) permitting for discharge of stormwater from construction sites and/or impacts on the beneficial uses of state jurisdictional waters. • Issues orders and waste discharge requirements for effluent discharge surface or groundwater.

No.	Jurisdictional Agency	Code, Reg, Std or Guideline	Notes
19	Central Valley Flood Protection Board	• Section 208 Water Quality Management • Encroachment Permits	• Administers Clean Water Act Section 208 compliance in conjunction with USACE • Issues encroachment permits for projects encroaching into state jurisdictional waters
20	CalEPA Department of Toxic Substances Control	California Health and Safety Code	Regulates hazardous and toxic substances and oversees cleanup, management, transport, treatment and disposal of contaminated and hazardous materials and D/B contractors will need to coordinate disruption of remediation systems at known contaminated sites and coordinate disposal of hazardous or toxic substances.
21	Native American Heritage Commission	California Public Resources Code (PRC) 5097.98	Must be notified in the event human remains are encountered during construction.
22	Office of the State Fire Marshal	NFPA 101	Oversees development and enforcement of fire prevention engineering.

No.	Jurisdictional Agency	Code, Reg, Std or Guideline	Notes
23	State Historic Preservation Office	• National Historic Preservation Act (NHPA) • CEQA	• Ensures that the compliance obligations under Section 106 of the NHPA are followed, which requires the lead federal agency of an undertaking to consider the effects of their actions on the properties that are listed or may be eligible for listing in the National Register of Historic Places. Requires preparation of a Section 106 report that evaluates the significance of archaeological, historical, and architectural properties, and develops treatment plans in accordance with the Secretary of the Interior Standards for Treatment of Historic Properties and Cultural Landscapes. To be executed through a programmatic agreement and a memorandum of agreement with the project proponents and other consulting or concurring parties. Oversees Native American consultations. • Manages CEQA compliance for historical resources.

No.	Jurisdictional Agency	Code, Reg, Std or Guideline	Notes
24	California Department of Parks and Recreation	Proposition 1A, 1974	• Administers 280 state park units, including Colonel Allensworth State Historic Park between the BNSF and Allensworth Bypass Alternatives. • Oversees administration of federal and state historic preservation programs.
Local Agencies			
25	Cities of Bakersfield, Shafter, and Wasco	City ordinances and General Plans	Implement city ordinances and manages development in accordance with the General Plan, including the following: • Encroachment permits • Demolition permits • Construction Management Plan • Transportation Management Plans • Maintenance Agreements • Noise restrictions • Water connection permit • Wastewater discharge permits • Must concur with FRA use determinations for city-owned Section 4(f) and 6(f) properties

No.	Jurisdictional Agency	Code, Reg, Std or Guideline	Notes
26	Counties of Kern, Kings, and Tulare	• County code and master plans • Williamson Act	The counties implement county ordinances and manage development in accordance with the county Master Plan, including the following: • Encroachment permits • Easement abandonment permits • Well permits for wells, piezometers, and exploratory borings that intersect the saturated zone. • Transportation Management Plans • Noise restrictions • Maintenance agreements • Wastewater discharge permits • Modify contracts for any affected Williamson Act properties.
27	San Joaquin Valley Air Pollution Control District	• Rule 9510 Indirect Source Review (ISR) Rule 201, General Permit Requirements Rule 403, Fugitive Dust Requirements Rule 442, Agriculture Coatings Requirements Rule 902, Asbestos Requirements • Federal Clean Air Act, Title V; San Joaquin Valley Unified Air Pollution Control District (SJVAPCD) Regulation II	• Must comply with Rule 9510 ISR mitigation requirements. • Permits for stationary-source emissions sources associated with the Fresno, Hanford, and Bakersfield stations and maintenance facilities located within SJVAPCD jurisdiction.

No.	Jurisdictional Agency	Code, Reg, Std or Guideline	Notes
Water Agencies			
28	• Alpaugh Irrigation District • Atwell Island Water District • California Water Service Company • North Kern Water Storage District • Pixley Irrigation District • Pond Poso Improvement District • Rosedale Ranch Improvement District • Semitropic Water Storage District • Shafter-Wasco Irrigation District •	License Agreements	• Encroachment permits • Maintenance agreements • Operations agreements (e.g., minimum flow requirements) • Seasonal restrictions on construction
Other Agencies			
29	BNSF Railway Company	• Operational guidelines • Safety controls	• Encroachment permits • Operations coordination • Responsible for design and construction of relocations
30	San Joaquin Valley Rail Committee	N/A	N/A
31	Underground Service Alert (USA)	• California Law California Business Professions Code Section 7110, page 22 California • Government Code (CGC) 4216 requirements, pages 23 - 31	Must call (800) 227-2600 2 working days or up to 14 calendar days prior to digging.
32	Union Pacific Railroad	• Operational guidelines • Safety controls	• Encroachment permits • Operations coordination • Responsible for design and construction of relocations
33	Utility owners (electric, gas, pipelines, etc.)	Various	Must coordinate relocations and service interruptions

[1] This table is based on information available at the PE4P level of design. Not all listed entities may be affected by construction or operation of the HSR, and other entities not listed may be affected. This list is not intended as a basis for construction planning. The Authority and/or design/build contractors will be responsible for identifying and complying with all applicable federal, state, and local requirements.

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Section 15.0

References

15.0 References

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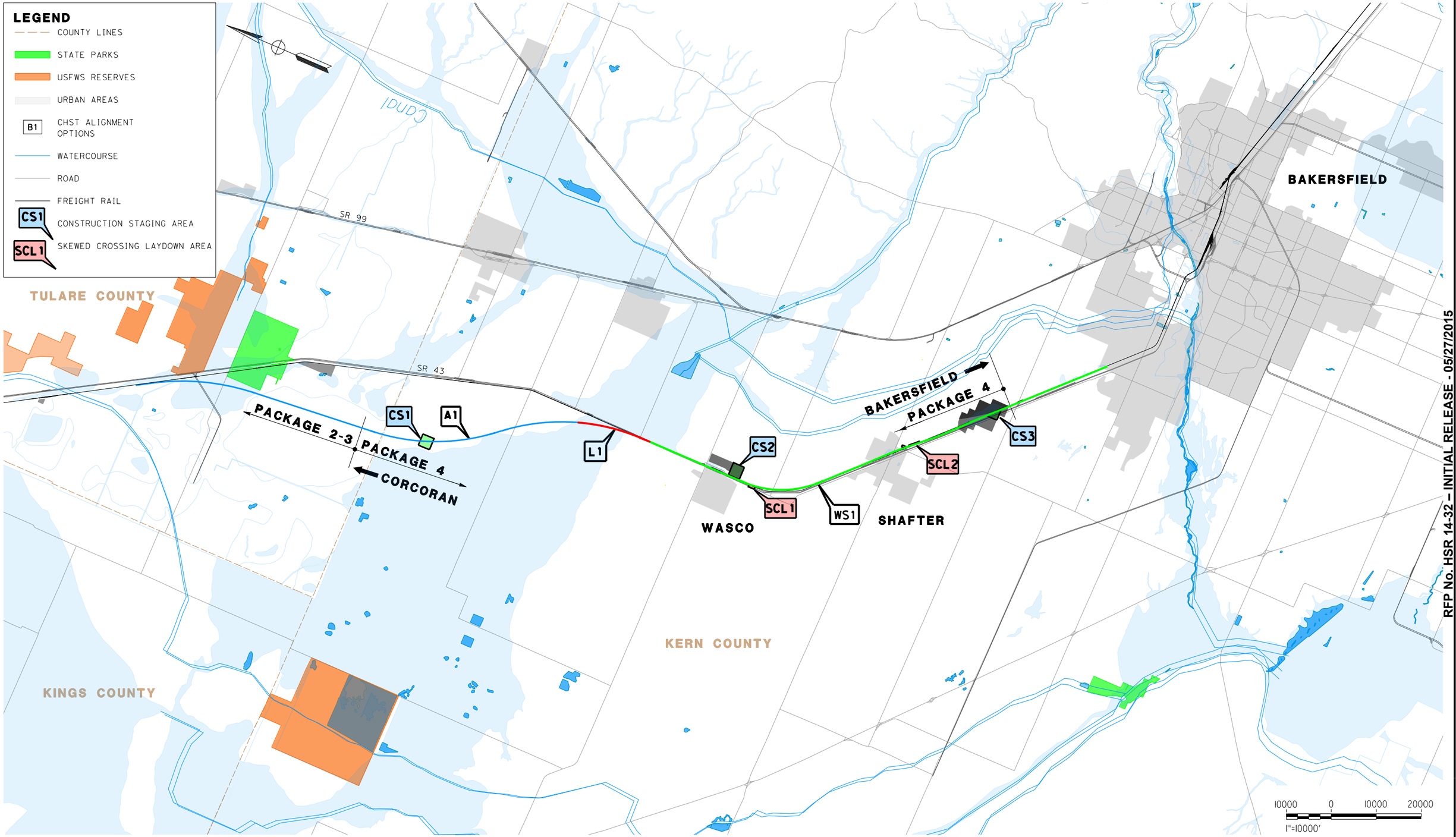
Appendix A

Construction Package 4 Alignment



RFP No. HSR 14-32 – INITIAL RELEASE - 05/27/2015

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY K. SEYMOUR
DRAWN BY P. TONKIN
CHECKED BY S. BURGES
IN CHARGE R. COFFIN
DATE 08/08/14

PROPOSED PRELIMINARY DESIGN

NOT FOR CONSTRUCTION

URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

CALIFORNIA
HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
PACKAGE 4
ALIGNMENT
LOCATION MAP

CONTRACT NO. HSR 06-0003
DRAWING NO. TT-B1100
SCALE AS SHOWN
SHEET NO. 1 OF 4

Appendix B

Preliminary Construction Schedule Analysis

HSR CP 4 Construction Sequencing and Durations

ID	Task Mode	Task Name	Duration	Start	Finish
1		**CP 4 Expected Construction Sequence and Durations assuming 4 working locations for standard viaduct construction**	**1140 days**	**Fri 7/1/16**	**Thu 8/15/19**
2		Right-of-Way Acquisitions - Completed by Authority	0 days	Fri 7/1/16	Fri 7/1/16
3		DB Contractor Mobilization - Set up Staging Area/s & Precasting Facilities	9 mons	Fri 7/1/16	Tue 3/28/17
4		DB Contractor Acquires Necessary additional TCE's	6 mons	Fri 7/1/16	Wed 12/28/16
5		Utility Relocations	12 mons	Fri 7/15/16	Mon 7/10/17
6		Canal Relocations - 0.27 miles	3 mons	Tue 9/13/16	Mon 12/12/16
7		Railroad Relocations - 4.7 miles of 2 track mainline	16 mons	Tue 9/13/16	Sat 1/6/18
8		Hydraulic Crossings 73 ea	6 mons	Tue 9/13/16	Sun 3/12/17
9		Wildlife Crossings - 41 ea	7 mons	Thu 10/13/16	Thu 5/11/17
10		Demolition - Buildings and Roadway Structures	12 mons	Tue 9/13/16	Fri 9/8/17
11		Complex Structures - 0.69 miles (WS1 alignment)	15 mons	Tue 3/28/17	Thu 6/21/18
12		Standard Structures - 4.73 miles	26 mons	Tue 3/28/17	Fri 5/17/19
13		Retained Fill - 3.33 miles	8 mons	Mon 7/10/17	Wed 3/7/18
14		At grade - 20.19 miles	15 mons	Mon 12/12/16	Wed 3/7/18
15		Roadway realignments	9 mons	Tue 9/13/16	Sat 6/10/17
16		Roadway Under/Overcrossings - 9 total (1 under & 8 over)	15 mons	Mon 12/12/16	Wed 3/7/18
17		Roadway Modifications including Demo Existing Roadways	12 mons	Tue 4/11/17	Fri 4/6/18
18		Demobilization	3 mons	Fri 5/17/19	Thu 8/15/19

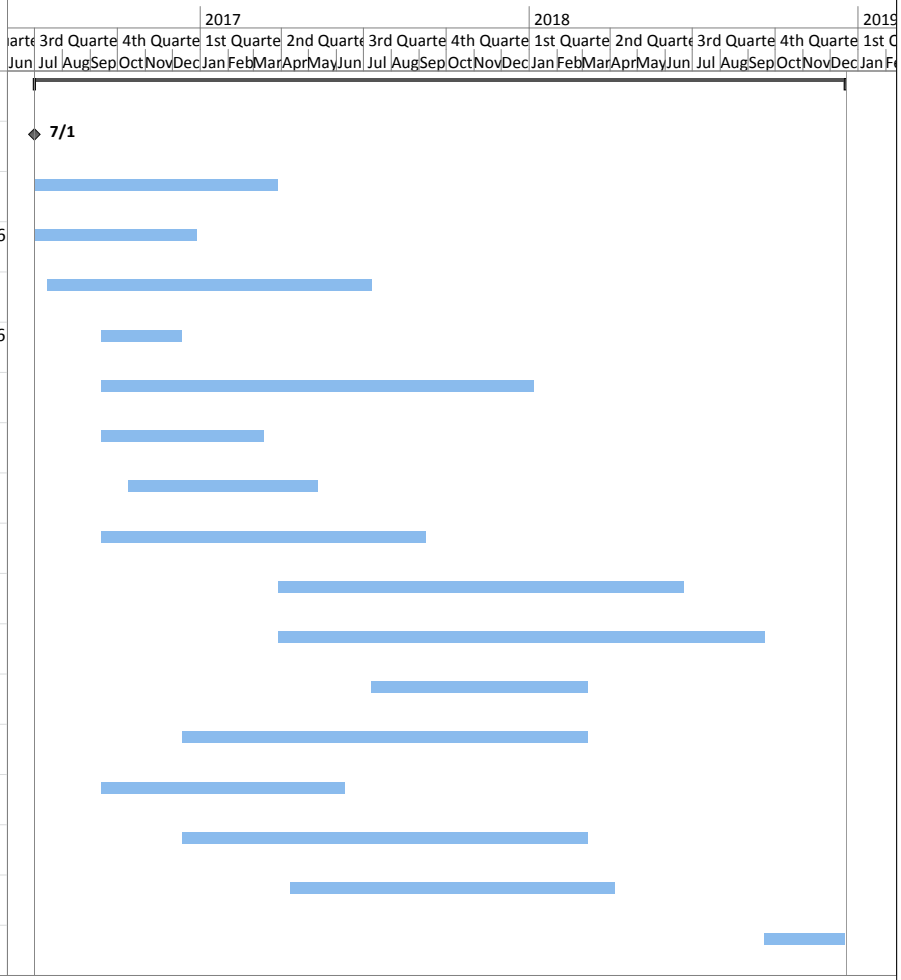
Project: HSR CP4
Date: Thu 10/9/14

Task	Project Summary	Inactive Milestone	Manual Summary Rollup	Deadline
Split	External Tasks	Inactive Summary	Manual Summary	Progress
Milestone	External Milestone	Manual Task	Start-only	Manual Progress
Summary	Inactive Task	Duration-only	Finish-only	

RFP No. HSR 14-32 – INITIAL RELEASE - 05/27/2015

HSR CP 4 Construction Sequencing and Durations

ID	Task Mode	Task Name	Duration	Start	Finish
1		**CP 4 Expected Construction Sequence and Durations assuming 6 working locations for standard viaduct construction**	**900 days**	**Fri 7/1/16**	**Tue 12/18/18**
2		Right-of-Way Acquisitions - Completed by Authority	0 days	Fri 7/1/16	Fri 7/1/16
3		DB Contractor Mobilization - Set up Staging Area/s & Precasting Facilities	9 mons	Fri 7/1/16	Tue 3/28/17
4		DB Contractor Acquires Necessary additional TCE's	6 mons	Fri 7/1/16	Wed 12/28/16
5		Utility Relocations	12 mons	Fri 7/15/16	Mon 7/10/17
6		Canal Relocations - 0.27 miles	3 mons	Tue 9/13/16	Mon 12/12/16
7		Railroad Relocations - 4.7 miles of 2 track mainline	16 mons	Tue 9/13/16	Sat 1/6/18
8		Hydraulic Crossings 73 ea	6 mons	Tue 9/13/16	Sun 3/12/17
9		Wildlife Crossings - 41 ea	7 mons	Thu 10/13/16	Thu 5/11/17
10		Demolition - Buildings and Roadway Structures	12 mons	Tue 9/13/16	Fri 9/8/17
11		Complex Structures - 0.69 miles (WS1 alignment)	15 mons	Tue 3/28/17	Thu 6/21/18
12		Standard Structures - 4.73 miles	18 mons	Tue 3/28/17	Wed 9/19/18
13		Retained Fill - 3.33 miles	8 mons	Mon 7/10/17	Wed 3/7/18
14		At grade - 20.19 miles	15 mons	Mon 12/12/16	Wed 3/7/18
15		Roadway realignments	9 mons	Tue 9/13/16	Sat 6/10/17
16		Roadway Under/Overcrossings - 9 total (1 under & 8 over)	15 mons	Mon 12/12/16	Wed 3/7/18
17		Roadway Modifications including Demo Existing Roadways	12 mons	Tue 4/11/17	Fri 4/6/18
18		Demobilization	3 mons	Wed 9/19/18	Tue 12/18/18



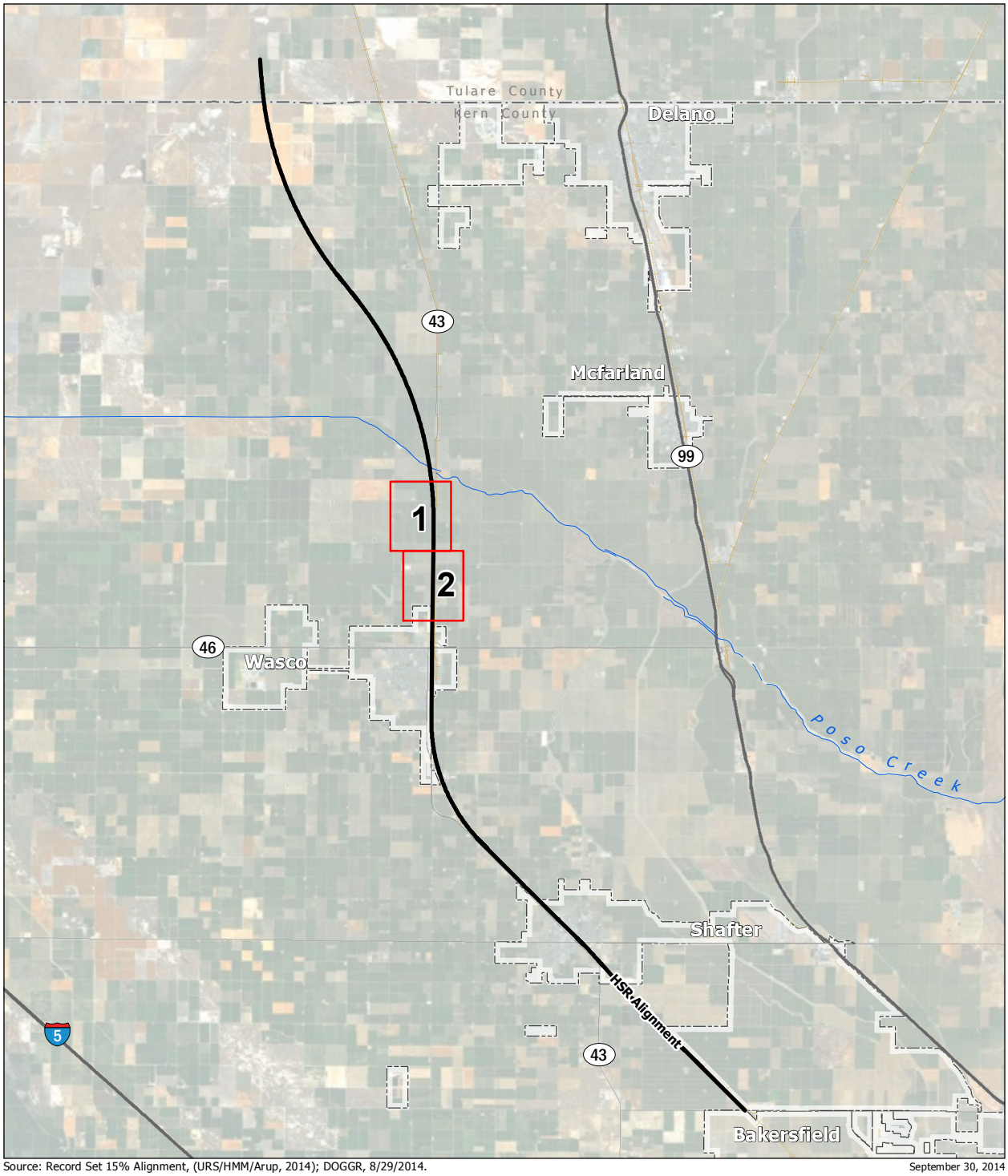
Project: HSR CP4
Date: Thu 10/9/14

Task	Project Summary	Inactive Milestone	Manual Summary Rollup	Deadline
Split	External Tasks	Inactive Summary	Manual Summary	Progress
Milestone	External Milestone	Manual Task	Start-only	Manual Progress
Summary	Inactive Task	Duration-only	Finish-only	

RFP No. HSR 14-32 – INITIAL RELEASE - 05/27/2015

Appendix C

Fresno to Bakersfield Oil Wells Map Book Extract



Source: Record Set 15% Alignment, (URS/HMM/Arup, 2014); DOGGR, 8/29/2014.

September 30, 2014

N

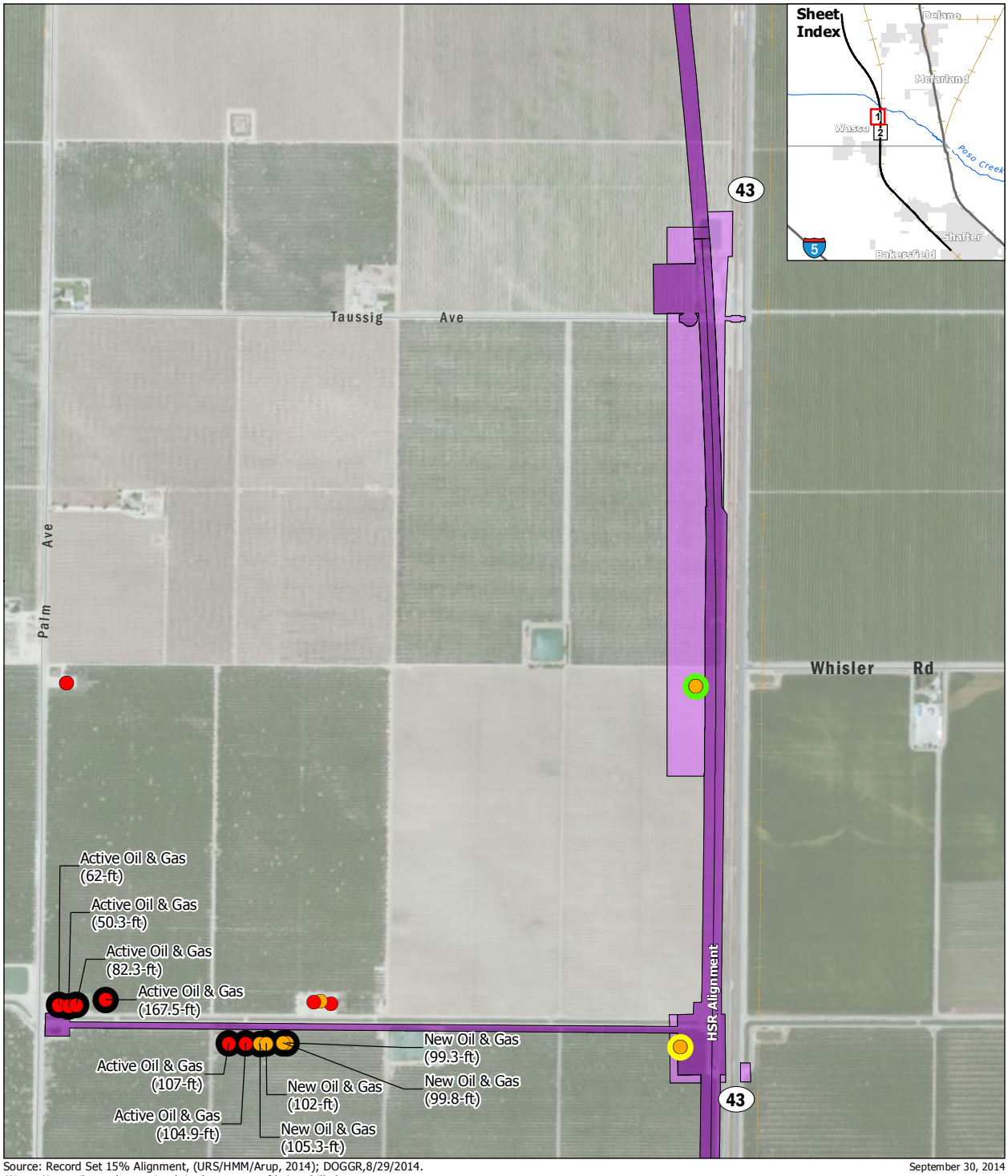
0 1 2
Miles

0 2 4
Kilometers

HSR Alignment

Sheet

Sheet Index
CP4: Oil Well Locations



Source: Record Set 15% Alignment, (URS/HMM/Arup, 2014); DOGGR,8/29/2014.
*Note: New = Recently permitted, in the process of being drilled
Active = Well has been drilled and completed
Plugged = Well has been plugged and abandoned to Division standards

September 30, 2014

N

0 500 1,000
Feet

0 250 500
Meters

HSR Alignment
Active well
New well
Plugged well

Primary Well Impacts
Within permanent impact footprint
Within temporary impact footprint

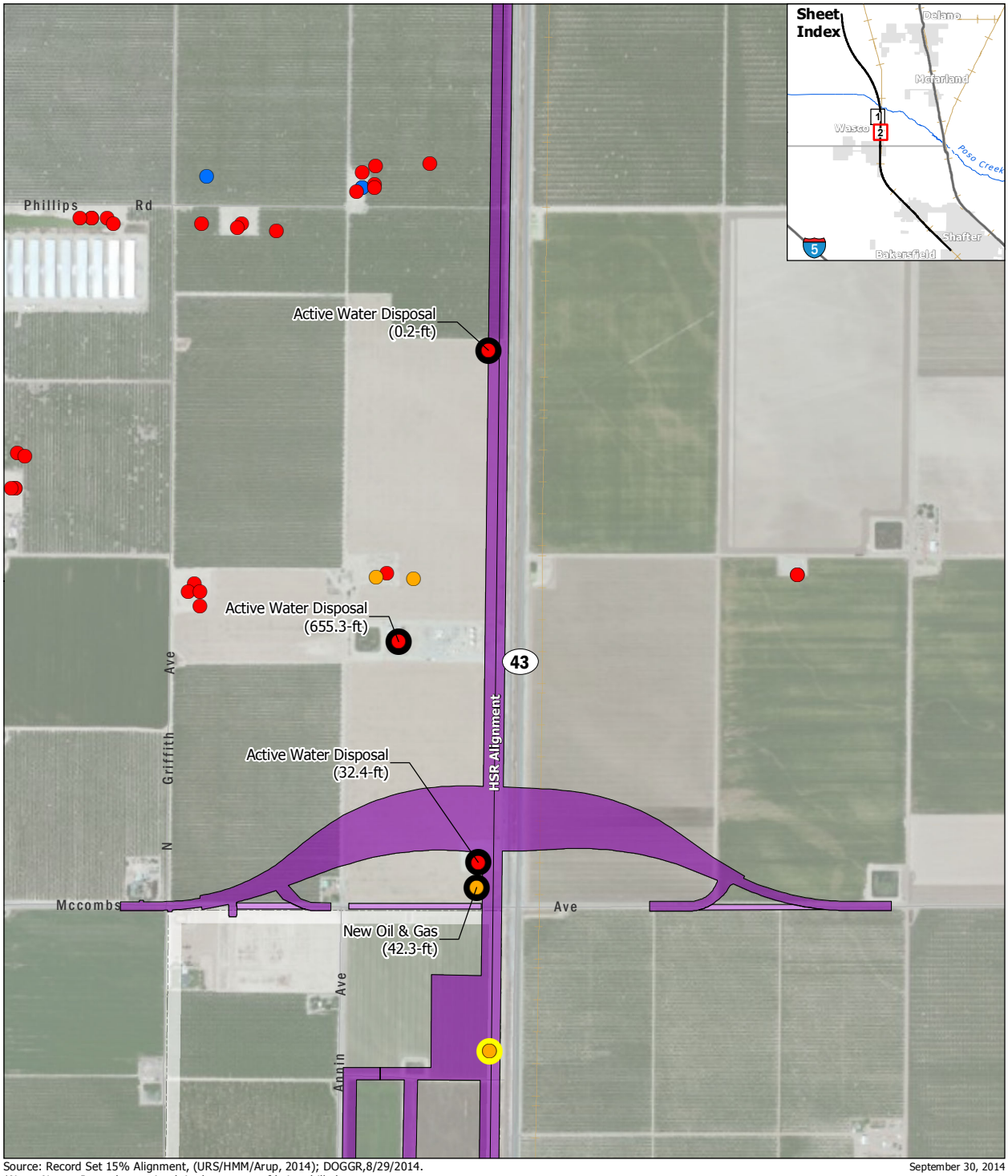
Secondary Well Impacts
On well pad that intersects impact footprint

Permanent footprint
Temporary footprint

Sheet 1 of 2
WS1 - CP4: Oil Well Locations

CALIFORNIA High-Speed Rail Authority

U.S. Department of Transportation Federal Railroad Administration



Source: Record Set 15% Alignment, (URS/HMM/Arup, 2014); DOGGR,8/29/2014.
*Note: New = Recently permitted, in the process of being drilled
Active = Well has been drilled and completed
Plugged = Well has been plugged and abandoned to Division standards

September 30, 2014

HSR Alignment
Active well
New well
Plugged well

Primary Well Impacts
Within permanent impact footprint
Within temporary impact footprint

Secondary Well Impacts
On well pad that intersects impact footprint

Permanent footprint
Temporary footprint

0 500 1,000
Feet
0 250 500
Meters

Sheet 2 of 2
WS1 - CP4: Oil Well Locations

Appendix D

Utility Information

APPENDIX D.1 Utility Contact Information

FB - Utility Contact Information

No.	Counties	Name	Title	Physical Address	Phone	E-mail
1	Fresno	Alan Weaver	Public Works Director	2220 Tulare St. 6th Floor Fresno, CA 93721	559.600.4078	aweaver@co.fresno.ca.us
2	Kern	Lorelei Oviatt	Planning Department Director	2700 "M" St. Suite 100 Bakersfield CA 93301	661.862.8615	
3	Kings	Kevin McAlister	Public Works Director	1400 W. Lacey Blvd. Hanford, CA 93230	559.582.3211	kevin.mcalister@co.kings.ca.us
4	Tulare	Britt L. Fussel	Assist. RMA Director	5961 South Mooney Blvd. Visalia, CA 93277	559.624.7000	bfussel@co.tulare.ca.us
No.	**Cities**	**Name**	**Title**	**Physical Address**	**Phone**	**E-mail**
5	Corcoran	Steve Kroeker	Public Works Director	832 Whitley Avenue, Corcoran, CA 93212	559.992.2151 x262	steve.kroeker@cityofcorcoran.com
6	Delano	Roman Dowling	Public Works Director	725 S. Lexington St. Delano, CA 93	661.721.3300 x673	rdowling@cityofdelano-ca.org
7	Fresno	Scott Mozier	Assist. Public Works Director	2600 Fresno Street, 4th Floor, Fresno Ca. 93721	559.621.8811	scott.mozier@fresno.gov
8	Hanford	Eric Froberg	Senior Engineer	900 S. 10th Avenue, Hanford, CA 93230	559.585.2550	efroberg@ci.hanford.ca.us
9	McFarland	Mario Gonzales	Acting Public Works Director	401 W. Kern Ave., Mc Farmland, CA 93250	661.792.3091	mgonzales@mcfarlandcity.org
10	Selma	Robert Weaver	Public Works Director	1710 Tucker Street, Selma, CA 93662	559.891.2200 x2215	bobw@cityofselma.com
11	Shafter	Michael James	Public Works Director	336 Pacific Avenue, Shafter, CA 93263	661.746.5002 x5018	mjames@shafter.com
12	Shafter	Kevin Harmon	City Engineer	336 Pacific Avenue, Shafter, CA 93263	661.746.5002 x5017	kharmon@shafter.com
13	Tulare	Lew Nelson	Public Works Director	3981 South "K" Street Tulare, CA 93274	559.685.4318	lnelson@ci.tulare.ca.us
14	Visalia	Andrew Benelli	Public Works Director	315 E. Acequia Avenue, Visalia, CA 93291	559.713.4340	abenelli@ci.visalia.ca.us
15	Wasco	Paul Paris	Public Works Director / Interim City Manager	801 8th Street Wasco, CA 93280	661.758.7214	paparis@ci.wasco.ca.us
No.	**Public Utilities**	**Name**	**Title**	**Physical Address**	**Phone**	**E-mail**
16	Alon USA Energy (Paramount Petroleum Corporation)	Mohsen Ahmadi	GM Opertions Planning & Logistics	4700 Downey Ave, Paramount, CA 90723	562.531.2060	mahmadi@ppcla.com
17	Cal Water					
18	Bakersfield District	Tom Treloar	District Manager	3725 South "H" Street, Bakersfield, CA 93304	661.837.7200	ttreloar@calwater.com
19	Kern River Valley District	Chris Whitley	District Manager	7138 Lake Isabella Blvd. Lake Isabella, CA 93240	760.379.5336	cwhitley@calwater.com
20	Selma District	Scott Bailey	District Manager	2042 Second Street Selma, CA 93662	559.896.4546	sbailey@calwater.com
21	Visalia District	Scott Bailey	District Manager	216 North Valley Oaks Drive, Visalia, CA 93292	559.624.1600	sbailey@calwater.com
22	Chevron	Mike Oliphant	Environmental Project Manager		925-790-6431	mike.oliphant@chevron.com
23	Cenergy International Servicess LLC (on behalf of Chevron Pipe Line Company)	John Simmons	Land Representative Contractor	9525 Camino Media, E-2036, Bakersfield, CA 93311	661.654.7685	jwsimmons@chevron.com
24	Kinder Morgan	Pipeline Inquiries	Kinder Morgan Energy Partners	1100 West Town and County Road Orange, CA. 92868	714.560.4908	
25	Occidental O&G Corp. (and Vintage Production California LLC)	Russell Ledbetter	California Minerals Manager		661.412.5484	Russ_Ledbetter@oxy.com
26	Pacific Gas and Electric	Elizabeth Proctor	PG&E GIS Supervisor	245 Market St., Mailcode N10A, San Francisco, ca 94105	415.973.0931	ejp0@pge.com
27	Science Applications International Corporation (SAIC)	Thomas A. Burns	Consulting Engineer	3800 Watt Avenue, Suite 210, Sacramento, Ca 95821	916.979.3748	thomas.a.burns@saic.com
28	Southern California Edison	William J. Harper	Service Planner	2425 S. Blackstone St., Tulare, Ca,93274	559.685.3742	
29	Southern California Gas Company	Beth Costa	Public Relations Manager	404 North Tipton Street, Visalia, CA. 93292	559.739.2319	bcosta@semprautilities.com
30	Equilon Enterprises, DBA Shell Oil Products	David Felger	Field Services Team Lead	20945 S Wilmington Ave, Carson, CA 90810	310.816.2053 (310.629.9504 mobile)	dave.felger@shell.com
31	Vaughn Water Company	Horacio Perez	Vaughn Water Company, Inc.	10014 Glenn Street, Bakersfield, CA 93312		horacio@vaughnwater.org
No.	**Irrigation/Water/Sanitation Districts**	**Name**	**Title**	**Physical Address**	**Phone**	**E-mail**
32	Alpaugh ID	Kevin Couch	General Manager	5458 Road 38, Alpaugh, CA 93201	559.949.8323	alpaugh93201@aol.com
33	Alta Irrigation District	Chris M. Kapheim	General Manager	289 North "L" Street Dinuba, CA 93618	559.591.0800 x13	cmk@altaid.org
34	Atwell Island ID	Keller / Wegley Engineering		P.O. Box 911, Visalia, CA 93279	559.732.7938	kelwegi@aol.com
35	Atwell Island ID	Kevin Couch	Secretary / Manager	P.O. Box 129, Alpaugh, CA 93201	559.949.8323	alpaugh93201@aol.com
36	Consolidated Irrigation District	Lupe Chavez	Assistant General Manager	2256 Chandler St., Selma CA 93662	559.896.1660	lchavez@cidwater.com
37	Corcoran Irrigation District	Gene Kilgore	Manager	1150 6 1/2 Avenue, Corcoran, CA 93212	559.992.5165	gkilgore@corcoranid.com
38	Delano-Earlimart Irrigation District	Dale Brogan	District Manager	14181 Ave. 24, Delano, CA 93215	661.725.2526	dbrogan@deid.org
39	Fresno Irrigation District	Bill Stretch	Chief Engineer	2907 South Maple Avenue, Fresno, CA 93725	559.233.7161 x318	bstretch@fresnoirrigation.com
40	Laguna Irrigation District	Scott Sills	General Manager	5065 19-1/2 Avenue, Riverdale, CA 93656	559.923.4239	scott.lid@starband.net
41	Lakeside Irrigation Water District	Richard L. Schafer	District Engineer	9304 Houston Ave., Hanford, CA. 93230	559.584.3396	rlsa@rlsmap.com
42	Lower Tule River Irrigation District	Dan Vink	General Manager	357 East Olive Avenue, Tipton, CA 93272	559.686.4716	ltrid@ltrid.org

FB - Utility Contact Information

No.	Counties	Name	Title	Physical Address	Phone	E-mail
43	Pixley Irrigation District	Dan Vink	General Manager	357 East Olive Avenue, Tipton, CA 93272	559.686.4716	dvink@ltrid.org
44	Shafter-Wasco Irrigation District	Dana Munn	General Manager	16294 Highway 43, Wasco, CA 93280	661.758.5153	northkern@aol.com
	GEI Consultants	Isela Medina	Project Manager	5100 California Avenue, Suite 227, Bakersfield, CA	661.716.3016	imedina@geiconsultants.com
45	South San Joaquin ID	Bere Lindley	F and A Manager	11011 E. Highway 120, Manteca, CA. 95336	209.249.4600	blindley@ssjid.com
46	Southern San Joaquin Municipal Utility District	William Carlisle	General Manager/Secretary	11281 Garzoli Ave, Delano, CA 93215	661.725.0610	
47	Tulare Irrigation District	Aaron Fukuda	Engineer	6826 Avenue 240, Tulare, CA. 93274	559.686.3425	akf@tulareid.org
No.	**Water Districts**	**Name**	**Title**	**Physical Address**	**Phone**	**E-mail**
48	Angiola Water District	Matt Hurley	General Manager	944 Whitley Ave. Suite A, Corcoran, CA. 93212	559.992.8980	
49	Cawelo WD	David Ansolabehere	Manager	17207 Industrial Farm Road, Bakersfield, CA 933308	661.393.6070	dansolabehere@cawelowd.org
50	J. G. Boswell Company	Walter Bricker	General Manager	26073 Santa Fe, Corcoran, CA. 93212	559.992.5011	wbricker@jgboswell.com
51	Kern Delta Water District	Dirk Reed	General Manager	501 Taft Highway, Bakersfield, CA 93307	661.834.4656	dreed@kerndelta.org
52	Kings County Water District	Don Mills	General Manager	200 N. Campus Drive, Hanford, CA. 93230	559.584.6412	kcwdh20@sbcglobal.net
53	Liberty Water District	Kevin Johansen	Consulting Engineer	286 W. Cromwell Ave., Fresno, CA. 93711	559.326.1100	kjohansen@ppeng.com
54	Malaga County Water District	Russ Holcomb	General Manager	3580 South Frank Street, Fresno, CA 93725	559.485.7353	rholcomb@malagacwd.org
55	Melga Water District	Walter Bricker	Manager	26073 Santa Fe, Corcoran, CA. 93212	559.992.5011	wbricker@jgboswell.com
56	North Kern Water Storage District	Richard Diamond	General Manager	33380 Cawelo Avenue, Bakersfield, CA. 93308	661.393.2696	rdiamond@northkernwsd.com
	GEI Consultants	Isela Medina	Project Manager	5100 California Avenue, Suite 227, Bakersfield, CA	661.716.3016	imedina@geiconsultants.com
57	San Luis & Delta-Mendota Water Authority	Dan Nelson	CEO	P.O. Box 2157, Los Banos, CA 93635	209.826.9696	susan.mussett@sldmwa.org
58	Semitropic Water Storage District	Jason Gianquinto	General Manager	1101 Central Avenue, Wasco, CA 93280	661.758.5113	jgianquinto@semitropic.com
	GEI Consultants	Isela Medina	Project Manager	5100 California Avenue, Suite 227, Bakersfield, CA	661.716.3016	imedina@geiconsultants.com
No.	**Conservation Districts**	**Name**	**Title**	**Physical Address**	**Phone**	**E-mail**
59	Kaweah-Delta Water Conservation District	Mark Larsen	General Manager	2975 N. Farmersville Blvd., Farmersville, CA. 93223	559.747.5601	mlarsen@kdwcd.com
60	Kings River Conservation District	Steven P. Stadler	Deputy General Manager of Flood Control and Environmental Resources/ Chief Engineer	4886 East Jensen Avenue, Fresno, CA 93725	559.237.5567	dpepper@krcd.org
No.	**Flood Control Districts**	**Name**	**Title**	**Physical Address**	**Phone**	**E-mail**
61	Fresno Metropolitan Flood Control District	Jerry Lakeman	District Engineer	5469 East Olive, Fresno, CA 93727	559.456.3292	jerryl@fresnofloodcontrol.org
No.	**Sanitation Districts**	**Name**	**Title**	**Physical Address**	**Phone**	**E-mail**
62	North of River Sanitary District	John Lamar	General Manager	204 Universe Ave., Bakersfield, CA 93308	661.399.6411	jlamar@norsd.com
63	Selma Kingsburg Fowler (SKF)	Veronica Cazares	Engineer	11301 E. Conejo Ave Kingsburg CA 93631	559.897.6500	vcacazares@skfcsd.org
No.	**Telecommunication Companies**	**Name**	**Title**	**Physical Address**	**Phone**	**E-mail**
64	AT&T	Geneva McJunkin	AT&T California Substructure Research	5555 E. Olive Avenue, Room 100 GG, Fresno, CA 93727	559.454.4697	gr7434@att.com
65	Brighthouse Networks	Greg Eoff	Construction Field Engineer	4450 California Ave, Bakersfield, CA 93308	661.395.3351	Gregory.Eoff@mybrighthouse.com
66	Central Valley Internet	Fredric W. Ritter	Construction Manager	9479 N. Fort Washington, Suite 105, Fresno, CA 93730	559.307.1320	fwritter@cvin.com
67	Charter Communication Cable	Johnny Sanchez	Designer	151 N. Main Porterville CA 93257	559.560.5323	Johnny.Sanchez@chartercom.com
68	Comcast Cable	Michael Sue	System Design Engineer	2441 N. Grove Industrial Drive Fresno, 93727	559.455.4221	michael_sue@cable.comcast.com
69	Verizon - Telecom	Steven R. Swinney	Engineer	201 Flynn Rd., Camarillo, Ca 93012	805.388.7302	steven.r.swinney@verizon.com
70	Level 3 Communications	Sam Isaacson		1075 Triangle Court, West Sacramento, CA 95605	916.612.0902	Sam.Isaacson@Level3.com

APPENDIX D.2 High-Risk Utility Information Log

F-B High Risk Utility Information Log

No.	Region	Owner	Dwg No.	HST Alignment	Station	Cross Road(s)	Facility Type	Size	Units	Length (feet)	% Cost Allocation	Disposition
1	URS/HMM/Arup Joint Venture	Semitropic Water Storage District	UT-C4700 & C4701	A1	4600+20± (700± ft left)	Garces Highway	Irrigation	24	inch	1500±		Relocated
2	URS/HMM/Arup Joint Venture	Semitropic Water Storage District	UT-C4512	A1	4626+75±	Un-named	Irrigation	21	inch	250±		Relocated
3	URS/HMM/Arup Joint Venture	Semitropic Water Storage District	UT-C4514	A1	4656+40±	Un-named	Irrigation	27	inch	270±		Relocated
4	URS/HMM/Arup Joint Venture	Semitropic Water Storage District	UT-C4518	A1	4719+60±	Schuster Road	Irrigation	36	inch	300±		Relocated
5	URS/HMM/Arup Joint Venture	Semitropic Water Storage District	UT-C4518	A1	4719+00±	Schuster Road	Irrigation	27	inch	450±		Relocated
6	URS/HMM/Arup Joint Venture	Semitropic Water Storage District	UT-C4518	A1	4718+00±	Schuster Road	Pumping Station	NA	cfs	NA		Relocated
7	URS/HMM/Arup Joint Venture	Semitropic Water Storage District	UT-C4518	A1	4718+30±	Schuster Road	Storage Tank	0.45	mg	NA		Relocated
8	URS/HMM/Arup Joint Venture	Semitropic Water Storage District	UT-C4520 & C4521	A1	4760+40±	Magnolia Avenue	Irrigation	12	inch	1100±		Relocated
9	URS/HMM/Arup Joint Venture	Sempra Energy Company	UT-C4520 & C4521	A1	4761+30±	Magnolia Avenue	Gas	3	inch	1100±		Relocated
10	URS/HMM/Arup Joint Venture	Semitropic Water Storage District	UT-C4706	A1	4774+50±	Magnolia Avenue	Irrigation	12	inch	200±		Relocated
11	URS/HMM/Arup Joint Venture	Sempra Energy Company	UT-C4706 & C4707	A1	4777+50± (1250± ft right)	Magnolia Avenue	Gas	3	inch	1200±		Relocated
12	URS/HMM/Arup Joint Venture	Sempra Energy Company	UT-C4522, C4704, C4705 & C4706	A1	4786+50±	Pond Road	Gas	3	inch	3700±		Relocated

F-B High Risk Utility Information Log

No.	Region	Owner	Dwg No.	HST Alignment	Station	Cross Road(s)	Facility Type	Size	Units	Length (feet)	% Cost Allocation	Disposition
13	URS/HMM/Arup Joint Venture	Semitropic Water Storage District	UT-C4704	A1	4793+00± (850± ft left)	Pond Road	Irrigation	18	inch	250±		Relocated
14	URS/HMM/Arup Joint Venture	Semitropic Water Storage District	UT-C4704 & C4705	A1	4799+00± (650± ft left)	Pond Road	Irrigation	15	inch	1270±		Relocated
15	URS/HMM/Arup Joint Venture	Semitropic Water Storage District	UT-C4524	A1	4805+00±	Farm Field	Irrigation	18	inch	250±		Relocated
16	URS/HMM/Arup Joint Venture	Semitropic Water Storage District	UT-C4526, C4527, C4708, C4709, C4710 & C4711	A1	4849+50±	Peterson Road	Irrigation	30	inch	4400±		Relocated
17	URS/HMM/Arup Joint Venture	Semitropic Water Storage District	UT-C4526 & C4527	A1	4849+50±	Peterson Road	Irrigation	15	inch	150±		Relocated
18	URS/HMM/Arup Joint Venture	Sempra Energy Company	UT-C4535 & C4536	L1	5218+00±	Blankenship Road	Gas	6	inch	260±		Relocated
19	URS/HMM/Arup Joint Venture	Semitropic Water Storage District	UT-C4537	L1	5245+20	Farm Field	Irrigation	21	inch	120±		Relocated
20	URS/HMM/Arup Joint Venture	North Kern Water Storage District	UT-C4543, C4544, C4545 & C4546	WS1	5428+80± - 5477+50±	Farm Field	Irrigation	18	inch	4870±		Relocated
21	URS/HMM/Arup Joint Venture	Shafter-Wasco Irrigation District	UT-C4719	WS1	5517+00± (650± ft. right)	Annin Avenue	Irrigation	12	inch	500±		Relocated
22	URS/HMM/Arup Joint Venture	Shafter-Wasco Irrigation District	UT-C4719	WS1	5517+50± (1150± ft. right)	Annin Avenue	Irrigation	12	inch	50±		Protected-in-Place
23	URS/HMM/Arup Joint Venture	City of Wasco	UT-C4549 & C4719	WS1	5517+00± (620± ft. right)	Gromer Avenue	Water	12	inch	350±		Protected-in-Place

F-B High Risk Utility Information Log

No.	Region	Owner	Dwg No.	HST Alignment	Station	Cross Road(s)	Facility Type	Size	Units	Length (feet)	% Cost Allocation	Disposition
24	URS/HMM/Arup Joint Venture	City of Wasco	UT-C4717 & C4718	WS1	5519+50± (1200± ft right)	McCombs Road	Water	12	inch	1450±		Protected-in-Place
25	URS/HMM/Arup Joint Venture	City of Wasco	UT-C4550	WS1	5543+65±	State Route 43	Water	12	inch	250±		Relocated
26	URS/HMM/Arup Joint Venture	City of Wasco	UT-C4550	WS1	5543+65± (450± ft. right)	F Street	Water	12	inch	50±		Protected-in-Place
27	URS/HMM/Arup Joint Venture	City of Wasco	UT-C4550	WS1	5547+80± (450± ft. right)	F Street	Water	8	inch	50±		Protected-in-Place
28	URS/HMM/Arup Joint Venture	Pacific Gas & Electric	U-C4551	WS1	5556+40±	State Route 46	Transmission Lines	115	kV	200±		Relocated
29	URS/HMM/Arup Joint Venture	Sempra Energy Company	UT-C4551	WS1	5557+00±	State Route 46	Gas	8	inch	100±		Relocated
30	URS/HMM/Arup Joint Venture	Sempra Energy Company	UT-C4552	WS1	5578+70±	G Street	Gas	2	inch	110±		Relocated
31	URS/HMM/Arup Joint Venture	City of Wasco	UT-C4552	WS1	5578+80±	G Street	Water	8	inch	110±		Relocated
32	URS/HMM/Arup Joint Venture	City of Wasco	UT-C4553	WS1	5593+30±	G Street	Water	6	inch	160±		Relocated
33	URS/HMM/Arup Joint Venture	City of Wasco	UT-C4553 &C4544	WS1	5593+30± - 5906+50±	G Street	Water	6	inch	1620±		Protected-in-Place
34	URS/HMM/Arup Joint Venture	City of Wasco	UT-C4554	WS1	5609+30	Poso Avenue	Water	8	inch	100±		Relocated

F-B High Risk Utility Information Log

No.	Region	Owner	Dwg No.	HST Alignment	Station	Cross Road(s)	Facility Type	Size	Units	Length (feet)	% Cost Allocation	Disposition
35	URS/HMM/Arup Joint Venture	Sempra Energy Company	UT-C4554	WS1	5609+70	Poso Avenue	Gas	2	inch	100±		Protected-in-Place
36	URS/HMM/Arup Joint Venture	City of Wasco	UT-C4554 & C4755	WS1	5611+80± - 5623+30±	G Street	Water	6	inch	1170±		Protected-in-Place
37	URS/HMM/Arup Joint Venture	City of Wasco	UT-C4555	WS1	5622+80±	16th Street	Water	8	inch	30±		Protected-in-Place
38	URS/HMM/Arup Joint Venture	City of Wasco	UT-C4555	WS1	5623+30±	16th Street	Water	12	inch	50±		Relocated
39	URS/HMM/Arup Joint Venture	City of Wasco	UT-C4555	WS1	5623+30±	16th Street	Water	8	inch	70±		Relocated
40	URS/HMM/Arup Joint Venture	City of Wasco	UT-C4555	WS1	5623+30±	16th Street	Water Well	NA	gpm	NA		Relocated
41	URS/HMM/Arup Joint Venture	Sempra Energy Company	UT-C4561, C4722 & C4723	WS1	5716+20±	Kimberlina Road	Gas	2	inch	2130±		Relocated
42	URS/HMM/Arup Joint Venture	Shafter-Wasco Irrigation District	UT-C4723	WS1	5711+50±	Kimberlina Road	Tank	NA	mg	NA		Relocated
43	URS/HMM/Arup Joint Venture	Sempra Energy Company	UT-C4723	WS1	5714+00± (800± ft right)	Kimberlina Road	Gas	2	inch	170±		Protected-in-Place
44	URS/HMM/Arup Joint Venture	Shafter-Wasco Irrigation District	UT-C4723	WS1	5716+00± (450± ft right)	Kimberlina Road	Irrigation	15	inch	60±		Relocated
45	URS/HMM/Arup Joint Venture	Shafter-Wasco Irrigation District	UT-C4561, C4722 & C4723	WS1	5716+80±	Kimberlina Road	Irrigation	66	inch	2050±		Relocated

F-B High Risk Utility Information Log

No.	Region	Owner	Dwg No.	HST Alignment	Station	Cross Road(s)	Facility Type	Size	Units	Length (feet)	% Cost Allocation	Disposition
46	URS/HMM/Arup Joint Venture	Shafter-Wasco Irrigation District	UT-C4561 & C4562	WS1	5717+00± - 5736+00 (400± ft right)	Kimberlina Road	Irrigation	15	inch	1900±		Protected-in-Place
47	URS/HMM/Arup Joint Venture	Shafter-Wasco Irrigation District	UT-C4562 - C4564	WS1	5736+00± - 5776+70 (400± ft right)	Kimberlina Road	Irrigation	12	inch	1820±		Protected-in-Place
48	URS/HMM/Arup Joint Venture	Shafter-Wasco Irrigation District	UT-C4725	WS1	5788+00± (1900± ft left)	Dresser Avenue Access Road	Irrigation	30	inch	80±		Relocated
49	URS/HMM/Arup Joint Venture	Shafter-Wasco Irrigation District	UT-C4725 &C4726	WS1	5799+00± (3000± ft left)	Dresser Avenue Access Road	Irrigation	8	inch	1850±		Relocated
50	URS/HMM/Arup Joint Venture	Shafter-Wasco Irrigation District	UT-C4567	WS1	5809+80±	Kimberlina Road	Irrigation	24	inch	280±		Protected-in-Place
51	URS/HMM/Arup Joint Venture	Sempra Energy Company	UT-C4569	WS1	5843+00	Merced Avenue	Gas	4	inch	100		Protected-in-Place
52	URS/HMM/Arup Joint Venture	Vintage Production California LLC	UT-C4569 & C4570	WS1	5845+25	Merced Avenue	Gas	NA	inch	400±		Relocated
53	URS/HMM/Arup Joint Venture	Vintage Production California LLC	UT-C4570, C4729 & C4731	WS1	5850+00± (470± left)	Merced Avenue	Gas	NA	inch	1750±		Protected-in-Place
54	URS/HMM/Arup Joint Venture	Sempra Energy Company	UT-C4572, C4732 & C4733	WS1	5883+40±	Poplar Avenue	Gas	2	inch	3580±		Relocated
55	URS/HMM/Arup Joint Venture	Sempra Energy Company	UT-C4572	WS1	5884+50± (150± ft left)	Madera Ave	Gas	2	inch	300±		Relocated
56	URS/HMM/Arup Joint Venture	Sempra Energy Company	UT-C4572	WS1	5885+50± (250± ft right)	Poplar Avenue	Gas	2	inch	50±		Relocated

F-B High Risk Utility Information Log

No.	Region	Owner	Dwg No.	HST Alignment	Station	Cross Road(s)	Facility Type	Size	Units	Length (feet)	% Cost Allocation	Disposition
57	URS/HMM/Arup Joint Venture	City of Wasco	UT-C4572	WS1	5886+00± (280± ft right)	Poplar Avenue	Water	10	inch	100±		Relocated
58	URS/HMM/Arup Joint Venture	Shafter-Wasco Irrigation District	UT-C4572 & C4733	WS1	5888+50± (500± ft right)	Poplar Avenue	Irrigation	15	inch	1200±		Relocated
59	URS/HMM/Arup Joint Venture	Shafter-Wasco Irrigation District	UT0C4737	WS1	5907+00± (2400± ft right)	Poplar Avenue	Irrigation	NA	inch	150±		Protected-in-Place
60	URS/HMM/Arup Joint Venture	City of Shafter	UT-C4573	WS1	5919+40 (280± ft right)	State Highway 43	Water	10	inch	170±		Protected-in-Place
61	URS/HMM/Arup Joint Venture	City of Shafter	UT-C4574	WS1	5919+40 (250± ft right)	State Highway 43	Water	12	inch	150±		Relocated
62	URS/HMM/Arup Joint Venture	Shafter-Wasco Irrigation District	UT-C4574, C4575 & C4735	WS1	5920+00	Fresno Avenue	Irrigation	60	inch	2570±		Relocated
63	URS/HMM/Arup Joint Venture	City of Shafter	UT-C4574	WS1	5920+00± (70± ft right)	Fresno Avenue	Water	8	inch	150±		Relocated
64	URS/HMM/Arup Joint Venture	City of Shafter	UT-C4574 & C4575	WS1	5920+10± (290± ft right)	Fresno Avenue	Water	10	inch	600±		Protected-in-Place
65	URS/HMM/Arup Joint Venture	City of Shafter	UT-C4574 & C4575	WS1	5920+10± (305± ft right)	Fresno Avenue	Water	8	inch	600±		Protected-in-Place
66	URS/HMM/Arup Joint Venture	Sempra Energy Company	UT-C4574 & C4575	WS1	5920+10± (295± ft right)	Fresno Avenue	Gas	3	inch	600±		Protected-in-Place
67	URS/HMM/Arup Joint Venture	City of Shafter	UT-C4577	WS1	5957+20±	N. Shafter Avenue & E. Tulare Avenue	Water	12	inch	350±		Relocated

F-B High Risk Utility Information Log

No.	Region	Owner	Dwg No.	HST Alignment	Station	Cross Road(s)	Facility Type	Size	Units	Length (feet)	% Cost Allocation	Disposition
68	URS/HMM/Arup Joint Venture	Sempra Energy Company	UT-C4577	WS1	5957+25±	N. Shafter Avenue	Gas	3	inch	150±		Relocated
69	URS/HMM/Arup Joint Venture	City of Shafter	UT-C4577	WS1	5957+90±	E. Tulare Avenue	Water	10	inch	130±		Relocated
70	URS/HMM/Arup Joint Venture	City of Shafter	UT-C4577	WS1	5958+80±	E. Tulare Avenue	Water	10	inch	150±		Relocated
71	URS/HMM/Arup Joint Venture	City of Shafter	UT-C4577	WS1	5959+10± (40± ft left)	E. Tulare Avenue	Water	10	inch	60±		Relocated
72	URS/HMM/Arup Joint Venture	City of Shafter	UT-C4578	WS1	5974+50±	Walker Street	Water	10	inch	100±		Relocated
73	URS/HMM/Arup Joint Venture	Sempra Energy Company	UT-C4578	WS1	5976+40±	Central Avenue	Gas	2	inch	150±		Protected-in-Place
74	URS/HMM/Arup Joint Venture	City of Shafter	UT-C4579	WS1	5989+00±	Walker Street	Water	6	inch	50±		Relocated
75	URS/HMM/Arup Joint Venture	Sempra Energy Company	UT-C4579	WS1	5993+25± (50± ft left)	Mannel Avenue	Gas	2	inch	50±		Protected-in-Place
76	URS/HMM/Arup Joint Venture	City of Shafter	UT-C4579	WS1	5993+60±	Mannel Avenue	Water	8	inch	130±		Relocated
77	URS/HMM/Arup Joint Venture	Sempra Energy Company	UT-C4579	WS1	5996+20±	El Lerdo Highway	Gas	2	inch	100±		Relocated
78	URS/HMM/Arup Joint Venture	Sempra Energy Company	UT-C4579	WS1	5996+40±	El Lerdo Highway	Gas	2	inch	100±		Relocated

F-B High Risk Utility Information Log

No.	Region	Owner	Dwg No.	HST Alignment	Station	Cross Road(s)	Facility Type	Size	Units	Length (feet)	% Cost Allocation	Disposition
79	URS/HMM/Arup Joint Venture	City of Shafter	UT-C4579	WS1	5996+40±	El Lerdo Highway	Water	8	inch	130±		Relocated
80	URS/HMM/Arup Joint Venture	Sempra Energy Company	UT-C4579	WS1	5996+45±	El Lerdo Highway	Gas	6	inch	130±		Relocated
81	URS/HMM/Arup Joint Venture	City of Shafter	UT-C4580	WS1	6002+45±	Easement	Water	8	inch	130±		Relocated
82	URS/HMM/Arup Joint Venture	Sempra Energy Company	UT-C4580	WS1	6012+00±	Easement	Gas	2	inch	140±		Relocated
83	URS/HMM/Arup Joint Venture	City of Shafter	UT-C4580	WS1	6012+10±	Easement	Water	10	inch	140±		Relocated
84	URS/HMM/Arup Joint Venture	City of Shafter	UT-C4580	WS1	6013+00± (80± ft right)	Easement	Water	10	inch	50±		Relocated
85	URS/HMM/Arup Joint Venture	City of Shafter	UT-C4580	WS1	6014+50±	Easement	Water	12	inch	140±		Relocated
86	URS/HMM/Arup Joint Venture	City of Shafter	UT-C4581	WS1	6028+80± (230± ft right)	State Highway 43	Water	8	inch	50±		Protected-in-Place
87	URS/HMM/Arup Joint Venture	Sempra Energy Company	UT-C4581	WS1	6029+00± (230± ft right)	State Highway 43	Gas	2	inch	50±		Protected-in-Place
88	URS/HMM/Arup Joint Venture	City of Shafter	UT-C4581	WS1	6029+20± (230± ft right)	State Highway 43	Water	14	inch	50±		Protected-in-Place
89	URS/HMM/Arup Joint Venture	Unknown	UT-C4581	WS1	6030+00± (130± ft left)	S. Beech Avenue	Oil Pipeline	NA	inch	250±		Protected-in-Place

F-B High Risk Utility Information Log

No.	Region	Owner	Dwg No.	HST Alignment	Station	Cross Road(s)	Facility Type	Size	Units	Length (feet)	% Cost Allocation	Disposition
90	URS/HMM/Arup Joint Venture	Shafter-Wasco Irrigation District	UT-C4581	WS1	6030+00± (130± ft right)	S. Beech Avenue	Irrigation	NA	inch	250±		Protected-in-Place
91	URS/HMM/Arup Joint Venture	City of Shafter	UT-C4581 & C4582	WS1	6030+95±	S. Beech Avenue	Water	14	inch	400±		Relocated
92	URS/HMM/Arup Joint Venture	Unknown	UT-C4581 C4582	WS1	6031+55±	S. Beech Avenue	Oil Pipeline	NA	inch	250±		Relocated
93	URS/HMM/Arup Joint Venture	Shafter-Wasco Irrigation District	UT-C4582	WS1	6031+60±	S. Beech Avenue	Irrigation	NA	inch	300±		Relocated
94	URS/HMM/Arup Joint Venture	City of Shafter	UT-C4582	WS1	6032+00± - 6046+05±	S. Beech Avenue & Easement	Water	12	inch	1450±		Relocated
95	URS/HMM/Arup Joint Venture	Sempra Energy Company	UT-C4582	WS1	6032+10±	S. Beech Avenue	Gas	16	inch	160±		Relocated
96	URS/HMM/Arup Joint Venture	Sempra Energy Company	UT-C4582	WS1	6033+20± (180± ft right)	Proposed Santa Fe Way	Gas	22	inch	100±		Protected-in-Place
97	URS/HMM/Arup Joint Venture	City of Shafter	UT-C4582	WS1	6033+40± - 6046+05±	S. Beech Avenue & Easement	Water	12	inch	1265±		Relocated
98	URS/HMM/Arup Joint Venture	Shafter-Wasco Irrigation District	UT-C4582	WS1	6033+50±	Los Angeles Avenue	Irrigation	42	inch	600±		Relocated
99	URS/HMM/Arup Joint Venture	Shafter-Wasco Irrigation District	UT-C4582	WS1	6033+50± (250± ft right)	State Highway 43	Irrigation	21	inch	20±		Relocated
100	URS/HMM/Arup Joint Venture	City of Shafter	UT-C4582 & C4583	WS1	6046+05± - 6059+20	S. Beech Avenue & Easement	Water	18	inch	1315±		Relocated

F-B High Risk Utility Information Log

No.	Region	Owner	Dwg No.	HST Alignment	Station	Cross Road(s)	Facility Type	Size	Units	Length (feet)	% Cost Allocation	Disposition
101	URS/HMM/Arup Joint Venture	Shafter-Wasco Irrigation District	UT-C4584	WS1	6066+50± (100± ft right)	Proposed Santa Fe Way	Irrigation	12	inch	200±		Relocated
102	URS/HMM/Arup Joint Venture	Sempra Energy Company	UT-C4584	WS1	6067+80±	Proposed Santa Fe Way	Gas	2	inch	350±		Relocated
103	URS/HMM/Arup Joint Venture	Shafter-Wasco Irrigation District	UT-C4586 &C4738	WS1	6103+45±	Orange Avenue	Irrigation	15	inch	830±		Relocated
104	URS/HMM/Arup Joint Venture	Shafter-Wasco Irrigation District	UT-C4586 & C4587	WS1	6109+20±	Cherry Avenue	Irrigation	18	inch	1280±		Relocated
105	URS/HMM/Arup Joint Venture	Shell Oil Company	UT-C4588 - C4598 & C4742 & C4743	WS1	6142+20± - 6291+00±	Burbank Street & Santa Fe Highway	Oil Pipeline	14	inch	17,200±		Relocated
106	URS/HMM/Arup Joint Venture	City of Shafter	UT-C4744 & C4745	WS1	6145+80± (400± ft left)	Burbank Street	Water	18	inch	1950±		Relocated
107	URS/HMM/Arup Joint Venture	City of Shafter	UT-C4598	WS1	6284+90±	Santa Fe Way	Water	6	inch	120±		Relocated
108	URS/HMM/Arup Joint Venture	City of Shafter	UT-C4598	WS1	6285+20±	Santa Fe Way	Water	12	inch	100±		Relocated

APPENDIX D.3 Utility Owner Contact Log

FB - Utility Owner Contact Log

No.	Owner	Date	Correspondence Type	Correspondence By	Description
1	Alpaugh Irrigation District	09/11/2009	Phone	URS - A. Molina	Called and left message on 09/11/09 with Heather.
2	Angiola Water District	09/11/2009	Phone	URS - A. Molina	Called and left message 09/11/09 with Admin. Richard Schafer out until 09/17/09.
3	California Water Service Group - Bakersfield	09/11/2009	Phone	URS - A. Molina	Contacted David Le and left message on 09/11/09.
4	City of Corcoran	09/11/2009	Phone	URS - A. Molina	Called 09/11/09 @ 3:30pm and spoke with Admin and she mention that Steve Kroeker will be back on Monday 09/14/09.
5	Pacific Gas & Electric	09/11/2009	Phone	URS - A. Molina	Contact Peter Lopez on 09/11/09, George Aguilar was assign staff to original request. Peter will locate George Aguilar replacement and he will call me back before 09/18/09.
6	Southern California Edison	09/11/2009	Phone	URS - A. Molina	Called Daniel Filla on 09/11/09 and left a message, 559.685.3295
7	Alpaugh Irrigation District	09/14/2009	Phone	URS - A. Molina	Heather called back on 09/14/09 and requested an email with request. Emailed Heather on 09/14/9 with request.
8	California Water Service Group - Bakersfield	09/14/2009	Phone	URS - A. Molina	Called returned 09/14/09 and requested email with request. Submitted email request on 09/14/09.
9	City of Corcoran	09/14/2009	Phone	URS - A. Molina	Called 09/14/09, spoke with Steve and instructed to contact Charles Sanford with Quad Knopf. They are the City Engineer. 559.449.2400
10	Pacific Gas & Electric	09/14/2009	Phone	URS - A. Molina	Jerry Moore called back on 09/14/09, service planning supervisor.
11	Pacific Gas & Electric	09/14/2009	Phone	URS - A. Molina	I called back on 09/14/09 and confirmed request
12	Southern California Edison	09/14/2009	Phone	URS - A. Molina	Daniel called back on 09/14/09 and requested email with request.
13	Southern California Edison	09/14/2009	Email	URS - A. Molina	Sent email to Daniel on 09/14/09 with request.
14	AT&T	09/15/2009	Phone	URS - A. Molina	Spoke with Frank Robles on 09/15/09 and made request. Emailed requested, emailed on 09/15/09. 559.739.6479.
15	Atwell Island Irrigation District	09/15/2009	Phone	URS - A. Molina	Called Kevin Couch and left message on 09/15/09 at his cell phone.
16	Charter Communication Cable	09/15/2009	Phone	URS - A. Molina	Called Johnny Sanchez on 09/15/09 and requested information. Johnny ask that I send him an email with request. Emailed Johnny on 09/15/09.
17	City of Corcoran	09/15/2009	Phone	URS - A. Molina	Contact Chuck and David Duda, sent info on 09/15/09 GIS files.
18	Consolidated Irrigation District	09/15/2009	Phone	URS - A. Molina	Called and left message on 09/15/09 to Phil Desetoff.
19	Delano-Earlimart Irrigation District	09/15/2009	Phone	URS - A. Molina	Called and spoke with Dale Brogan on 09/15/09. Dale mention they have a NTS GIS model, and hard copies. We can pick them up anytime. 661.725.2526
20	Kings County Water District	09/15/2009	Phone	URS - A. Molina	Called and left message for Don Mills with Rene on 09/15/09. 559.584.6412
21	Lakeside Irrigation District	09/15/2009	Phone	URS - A. Molina	Called on 09/15/09 and was referred to engineer, R.L. Schafer. 559.734.1348
22	North Kern Water Storage District	09/15/2009	Phone	URS - A. Molina	Called on 09/15/09 and left message for Jerry Ezell. Jerry is out until 09/21/09.
23	North of River Sanitary District	09/15/2009	Phone	URS - A. Molina	Called on 09/15/09 and left message with Nancy for John Lamar. 661.399.6411
24	North of River Sanitary District	09/15/2009	Phone	URS - A. Molina	John called back on 09/15/09 and requested email with request. Sent email with request on 09/15/09.
25	Selma Kingsburg Fowler (SFK)	09/15/2009	Phone	URS - A. Molina	Contacted Veronica Cazarez on 09/15/09 with request. Veronica requested email with request. Emailed request on 09/15/09. 559.897.6500 Ext. 230
26	Verizon	09/15/2009	Phone	URS - A. Molina	Called and spoke with Travis Earhart on 09/15/09. Email requested, email sent on 09/15/09. 559.637.0665.
27	Comcast Cable	09/16/2009	Phone	URS - A. Molina	Called Jim Gaskin on 09/16/09 and made request. Jim provided contact of Frank Castro. Emailed Frank on 09/16/09 with request. Called Frank on 09/16/09, he mention it will take 7-10 work days due to complexity of project. 559.455.4227.

FB - Utility Owner Contact Log

No.	Owner	Date	Correspondence Type	Correspondence By	Description
28	Lakeside Irrigation District	09/17/2009	Phone	URS - A. Molina	Called Richard Schafer on 09/17/09. Richard will send info request on 09/23/09.
29	California Water Service Group - Bakersfield	09/18/2009	Phone	URS - A. Molina	Email respond on 09/18/09 with contact info. of staff working on request. Pete Marshall, 408.367.8301.
30	Comcast Cable	09/18/2009	Phone	URS - A. Molina	Frank called back on 09/18/09. A-C Square Inc. will be collecting the information for Comcast Cable per my request. They are out of Clovis Ca.
31	North Kern Water Storage District	09/21/2009	Phone	URS - A. Molina	Called on 09/21/09 and spoke with Jerry. Jerry ask me to send email with request. Send email on 09/22/09. Jerry ask that I contact Ralph Sanchez with Semitropic water. 661.758.2113
32	Semitropic Water Storage District	09/21/2009	Phone	URS - A. Molina	Called Ralph Sanchez on 09/21/09 with request. 661.758.5113
33	Verizon	09/21/2009	Phone	URS - A. Molina	Email back on 09/21/09 with fee/see email
34	Alpaugh Irrigation District	09/22/2009	Phone	URS - L. Howard	Larry called on 09/22/09 and Kevin said he will send map on 09/23/09.
35	Atwell Island Irrigation District	09/22/2009	Phone	URS - L. Howard	Larry Howard called on 09/22/09 and Kevin said he will mail map out on 09/23/09.
36	Consolidated Irrigation District	09/22/2009	Phone	URS - L. Howard	Larry Howard called on 09/22/09 and spoke with Phil.
37	Kings County Water District	09/22/2009	Phone	URS - L. Howard	Larry Howard called on 09/22/09 and spoke with Don. Don to fax map on 09/23/09. Received map on 09/23/09. Map is poor quality.
38	North Kern Water Storage District	09/22/2009	Phone	URS - A. Molina	Contacted Ralph Sanchez on 09/22/09 and requested info.
39	Semitropic Water Storage District	09/22/2009	Phone	URS - A. Molina	Leslie Pajuelo to provide map, requested email with request. Emailed request on 09/22/09.
40	Angiola Water District	09/23/2009	Phone	URS - A. Molina	Called on 09/23/09 and Spoke with Richard, provided contact name of Monte Mitchell, 559.992.8980
41	Lakeside Irrigation District	09/23/2009	Email	URS - A. Molina	Received map from Michelle Parker on 09/23/09.
42	Consolidated Irrigation District	09/25/2009	Email	URS - L. Howard	Lupe Chavez emailed map on 09/25/09.
43	Alpaugh Irrigation District	09/27/2009	Mail	URS - A. Molina	Received documents on 10/27/09.
44	Kings County Water District	09/28/2009	Phone	URS - L. Howard	Larry Howard contacted Don again on 09/28/09 and requested better quality map.
45	Kings County Water District	09/28/2009	Email	URS - L. Howard	Received map via mail
46	Southern California Gas Company	09/28/2009	Phone	URS - A. Molina	Called JoAnn Simpson on 09/28/09 and left message requesting work order fee. 213.244.5888
47	Verizon	09/28/2009	Phone	URS - A. Molina	Called 09/28/09 requesting work order fee and left message.
48	Verizon	09/29/2009	Phone	URS - A. Molina	Travis returned my call and left me a message 09/29/09.
49	Verizon	09/29/2009	Phone	URS - A. Molina	Called Travis on 10/01/09 and requested invoice for request.
50	Southern California Gas Company	09/30/2009	Phone	URS - A. Molina	JoAnn called back on 09/30/09 and left message. Martin had cancel work order. Need to start new one. Canceled on 05/15/09.
51	Pacific Gas & Electric	10/01/2009	Phone	URS - A. Molina	I called on 10/01/09 and left message.
52	Southern California Edison	10/01/2009	Phone	URS - A. Molina	I called on 10/01/09 and left message.
53	Angiola Water District	10/02/2009	Phone	URS - A. Molina	Called and spoke with Monte on 10/02/09. Monte will send maps via email.
54	Angiola Water District	10/02/2009	Email	URS - A. Molina	Received map via email on 10/02/09 from Monte Mitchell.
55	AT&T	10/02/2009	Phone	URS - A. Molina	Called left message 10/02/09 for Frank.
56	California Water Service Group - Bakersfield	10/02/2009	Phone	URS - A. Molina	Called and spoke with Pete on 10/02/09.

FB - Utility Owner Contact Log

No.	Owner	Date	Correspondence Type	Correspondence By	Description
57	Charter Communication Cable	10/02/2009	Phone	URS - A. Molina	Called Johnny on 10/02/09, resend request. First request attachment did not work.
58	Comcast Cable	10/02/2009	Phone	URS - A. Molina	Called Frank Castro on 10/02/09 and left message.
59	Delano-Earlimart Irrigation District	10/02/2009	Phone	URS - A. Molina	Called and left message 10/02/09 requesting NTS GIS model and hard copy with Dale.
60	North Kern Water Storage District	10/02/2009	Phone	URS - A. Molina	Called on 10/02/009 and left message for Ralph.
61	North of River Sanitary District	10/02/2009	Phone	URS - A. Molina	Called John on 10/02/09, spoke with Nancy. John out until 10/07/09.
62	Selma Kingsburg Fowler (SFK)	10/02/2009	Phone	URS - A. Molina	Called Veronica and left message 10/02/09.
63	Semitropic Water Storage District	10/02/2009	Phone	URS - A. Molina	Called and left message for Ralph on 10/02/09.
64	Southern California Edison	10/02/2009	Phone	URS - A. Molina	Received call from Daniel on 10/02/09, provided Bill DeLain (Public Relations) cell 559.331.0040 as another contact. He has contacted individual mapping to give info. Have not heard back. On vacation for next two weeks.
65	Southern California Gas Company	10/02/2009	Phone	URS - A. Molina	Called on 10/02/09 and left message for JoAnn, on how to initiate the process for new request.
66	AT&T	10/05/2009	Phone	URS - A. Molina	Frank responded with email on 10/05/09. See email.
67	California Water Service Group - Bakersfield	10/05/2009	Email	URS - A. Molina	Received email on 10/05/09.
68	Comcast Cable	10/05/2009	Phone	URS - A. Molina	Frank Castro called back on 10/05/09 information will be ready in 5-7 days from today.
69	Corcoran Irrigation District	10/05/2009	Phone	URS - A. Molina	Called Carlo Willcox on 10/02/09, mal map on 10//05/09. 559.992.5165
70	California Water Service Group - Bakersfield	10/06/2009	Phone	URS - A. Molina	No facilities per Pete 10/06/09.
71	California Water Service Group - Bakersfield	10/06/2009	Phone	URS - A. Molina	David Le, 408.367.8337
72	Selma Kingsburg Fowler (SFK)	10/06/2009	Phone	URS - A. Molina	Veronica called to make me aware that she will be sending information over today via email 10/06/09.
73	AT&T	10/07/2009	Phone	URS - A. Molina	Called Frank on 10/07/09, he says the area is too big, will not provide info. He will let his supervisor know about us buying maps from them.
74	AT&T	10/09/2009	Email	URS - A. Molina	Sent request to Kiera Nolan on 10/09/09 via mail. Contact info. 626.356.6800
75	Southern California Gas Company	10/09/2009	Phone	URS - A. Molina	JoAnn called on 10/09/09 and explains what to submit for new request. Emailed her request. jsimpson@sempreutilities.com
76	North Kern Water Storage District	10/10/2009	Phone	URS - A. Molina	Requested data source files 11/10/09.
77	Comcast Cable	10/14/2009	Phone	URS - A. Molina	Frank called on 10/14/09 and said he will send info. Via email today.
78	AT&T	10/15/2009	Phone	URS - A. Molina	Called Mr. Nolan on 10/15/09 and spoke with Marie Ross. They had just received the request. Mr. Nolan to review request, I will follow up week of 10/19-23/09.
79	Pacific Gas & Electric	10/15/2009	Phone	URS - A. Molina	Called Jerry on 10/15/09 and left message.
80	Verizon	10/15/2009	Phone	URS - A. Molina	Called Travis on 10/15/09 and inquired on invoice for request of utilities. Email out today, follow by hardcopy in mail to Fresno Office.
81	Verizon	10/15/2009	Email	URS - A. Molina	Received email 10/15/09 with non-disclosure agreement.
82	AT&T	10/19/2009	Phone	URS - A. Molina	Director for Central Valley – Office in Salinas. Birt Johnson called back on 10/19/09. 831.424.0233.
83	Southern California Edison	10/19/2009	Phone	URS - A. Molina	Daniel called back on 10/19/09 and left message regarding contact on new HST lead.
84	Charter Communication Cable	10/20/2009	Phone	URS - A. Molina	Emailed 10/20/09 asking for status.
85	Corcoran Irrigation District	10/20/2009	Phone	URS - A. Molina	Called 10/20/09 and left message with secretary.

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No.	Owner	Date	Correspondence Type	Correspondence By	Description
86	Delano-Earlimart Irrigation District	10/20/2009	Phone	URS - A. Molina	Called Dale on 10/20/09 and provided mailing address to mail their map.
87	North Kern Water Storage District	10/20/2009	Phone	URS - A. Molina	Dana Mudd, 661.393.2696 called and left message on 10/20/09.
88	North of River Sanitary District	10/20/2009	Phone	URS - A. Molina	Called and spoke with John Lamar 10/20/09 information available in one to two weeks fallow up then.
89	Pacific Gas & Electric	10/20/2009	Phone	URS - A. Molina	Called on 10/20/09 and spoke with Jerry
90	Pacific Gas & Electric	10/20/2009	Phone	URS - A. Molina	Called Jerry on 10/20/09 and said Fresno GIS people will get Info/Data for us.
91	Semitropic Water Storage District	10/20/2009	Phone	URS - A. Molina	Received info 10/20/09.
92	Semitropic Water Storage District	10/20/2009	Phone	URS - A. Molina	Called and spoke with Ralph on 10/20/09 emailed him, he will send info.
93	Southern California Edison	10/20/2009	Phone	URS - A. Molina	Called Daniel on 10/20/09 and left message.
94	Southern California Gas Company	10/20/2009	Email	URS - A. Molina	Emailed JoAnn 10/20/09 asking for a status.
95	Southern California Gas Company	10/20/2009	Phone	URS - A. Molina	Called JoAnn, request to be approved by end of week.
96	Verizon	10/20/2009	Email	URS - A. Molina	Emailed back non-disclosure agreement 10/20/09.
97	Corcoran Irrigation District	10/21/2009	Phone	URS - A. Molina	Carlo called back 10/21/09. Data will be mailed on 10/22/09 via US postal service.
98	Southern California Edison	10/21/2009	Phone	URS - A. Molina	Daniel called 10/21/09, request has been forwarded to Paul J. Demartini Vice-President advance technology. His team will call me in a couple of days.
99	Atwell Island Irrigation District	10/23/2009	Mail	URS - L. Howard	Received docs on 10/23/09.
100	Delano-Earlimart Irrigation District	10/27/2009	Mail	URS - A. Molina	Received map 10/27/09.
101	Southern California Edison	10/27/2009	Phone	URS - A. Molina	Called on 10/27/09 and left message, have not heard from advance technology team.
102	Corcoran Irrigation District	10/29/2009	Phone	URS - A. Molina	Received 10/29/09 hard copy of map. Had CVR make PDF 11/02/09.
103	Southern California Edison	11/04/2009	Phone	URS - A. Molina	Daniel called 11/04/09 and said he was going to forward email request to Michael Montoya, Rebecca Firman and Jana Monroe (a team assembled to deal with HST).
104	Southern California Gas Company	11/04/2009	Phone	URS - A. Molina	Called JoAnn 11/04/09 and left message.
105	Charter Communication Cable	11/05/2009	In-Person	URS - A. Molina	Met with Johnny Sanchez 11/05/09, only towns with charter services are Earlimart, Pixley and Tipton.
106	North Kern Water Storage District	11/05/2009	Phone	URS - A. Molina	Called 11/05/09 and left message.
107	North of River Sanitary District	11/05/2009	Phone	URS - A. Molina	Called and spoke with John 11/05/09, still working on data, call back before thanksgiving.
108	Southern California Gas Company	11/05/2009	Mail	URS - A. Molina	Received invoice for maps 11/05/09, spoke with Katie Eastham on how to process invoice. Sally Perdue process invoice request in Basware.
109	North Kern Water Storage District	11/09/2009	Phone	URS - A. Molina	Dana called back and requested email, emailed sent also on 11/09/09 with request.
110	North Kern Water Storage District	11/10/2009	Email	URS - A. Molina	Received email from Dana with Data/Map on 11/10/09.
111	Southern California Gas Company	11/10/2009	Phone	URS - A. Molina	Called JoAnn 11/10/09 and left message.
112	North Kern Water Storage District	11/17/2009	Phone	URS - A. Molina	Received data source files on 11/17/09 from NKWSD.
113	Pacific Gas & Electric	11/18/2009	Email	URS - A. Molina	Instructed not to make any contact with PG&E, PMT group will coordinate.
114	Southern California Edison	11/18/2009	Email	URS - A. Molina	Instructed not to make contact any more with SCE, PMT team will coordinate.
115	North of River Sanitary District	12/02/2009	Email	URS - A. Molina	Received data 12/02/09 via email, forward to SF.
116	Southern California Gas Company	01/04/2010	Phone	URS - A. Molina	New Number 213.244.3727

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No.	Owner	Date	Correspondence Type	Correspondence By	Description
117	Southern California Gas Company	01/04/2010	Phone	URS - A. Molina	Kirk Skinner, 559.739.2311
118	Southern California Gas Company	01/04/2010	Mail	URS - A. Molina	Received maps from So. Cal. Gas on 01/04/10.
119	Southern California Gas Company	01/05/2010	Email	URS - A. Molina	Forward maps to Kirsten Lawrence (SF) on 01/05/10.
120	AT&T	07/11/2011	Letter, Phone	URS	Sent 'A' Letter
121	City of Fresno	07/11/2011	Letter	URS	Sent 'A' Letter
122	Fresno County	07/11/2011	Email	URS	Responded via email stating they do not have any conflicting utilities within the current project limits.
123	Fresno County	07/11/2011	Letter	URS	Sent 'A' Letter
124	Fresno Irrigation District	07/11/2011	Letter	URS	Sent 'A' Letter
125	Fresno Metropolitan Flood Control District	07/11/2011	Letter	URS	Sent 'A' Letter
126	Kinder Morgan	07/11/2011	Letter	URS	Sent 'A' Letter
127	Southern California Edison	07/11/2011	Letter	URS	Sent 'A' Letter
128	Verizon - Telecom	07/11/2011	Letter	URS	Sent 'A' Letter
129	Comcast Cable	07/22/2011	Letter, Phone	URS	Sent 'A' Letter
130	Southern California Gas Company	07/22/2011	Letter	URS	Sent 'A' Letter
131	Fresno Metropolitan Flood Control District	07/29/2011	Mail	URS	Received basin plans for RR drainage area and marked up utility plan sheets.
132	AT&T	08/02/2011	Letter, Phone	URS	Sent 'A' Letter
133	City of Hanford	08/02/2011	Letter	URS	Sent 'A' Letter
134	Comcast Cable	08/02/2011	Letter, Phone	URS	Sent 'A' Letter
135	Fresno County	08/02/2011	Letter	URS	Sent 'A' Letter
136	Fresno Irrigation District	08/02/2011	Letter	URS	Sent 'A' Letter
137	Kaweah-Delta Water Conservation District	08/02/2011	Letter	URS	Sent 'A' Letter
138	Kinder Morgan	08/02/2011	Letter	URS	Sent 'A' Letter
139	King County	08/02/2011	Letter	URS	Sent 'A' Letter
140	Kings County Water District	08/02/2011	Letter	URS	Sent 'A' Letter
141	Lakeside Irrigation District	08/02/2011	Letter	URS	Sent 'A' Letter
142	Liberty Water District	08/02/2011	Letter	URS	Sent 'A' Letter
143	Southern California Edison	08/02/2011	Letter	URS	Sent 'A' Letter
144	Southern California Gas Company	08/02/2011	Letter	URS	Sent 'A' Letter
145	Verizon - Telecom	08/02/2011	Letter	URS	Sent 'A' Letter
146	Consolidated Irrigation District	08/04/2011	Letter	URS	Sent 'A' Letter
147	Corcoran Irrigation District	08/04/2011	Letter	URS	Sent 'A' Letter
148	Kings River Conservation District	08/09/2011	Letter	URS	Sent 'A' Letter
149	Lakeside Irrigation District	08/09/2011	Email	URS	Received the LIWD Distribution Facilities Map

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No.	Owner	Date	Correspondence Type	Correspondence By	Description
150	Pacific Gas & Electric	08/12/2011	Letter	URS	Sent 'A' Letter
151	Consolidated Irrigation District	08/16/2011	Mail	URS	Received GIS DATA and a pdf containing 9 exhibits with CID and Farmer owned lateral facilities.
152	Kings River Conservation District	08/16/2011	Letter	URS	Received a letter stating no impacts to their utilities; however, the District maintains three of the six levees on the Kings River system that are affected by the proposed r/w. An encroachment permit is required. See letter for additional information
153	City of Hanford	08/17/2011	Mail	URS	Received information on proposed 6" water line to Kit Carson School
154	J. G. Boswell Company	08/22/2011	Letter	URS	Sent 'A' Letter
155	Southern California Edison	08/22/2011	Mail	URS	Received markup to utility plan sheets
156	Comcast Cable	09/01/2011	Mail	URS	Received marked up Package #1 utility plan sheets
157	Pacific Gas & Electric	09/12/2011	Email	URS	Received TIFF files of plat for gas and electric lines
158	Fresno Irrigation District	09/13/2011	Email	URS	Received 2 pdfs. First Pdf contained a table with FID Facility info and 3 maps of impacted FID facilities. The second pdf is a markup of the utility plan sheets.
159	City of Fresno	09/27/2011	Mail	URS	Received markup to utility plan sheets
160	Kinder Morgan	10/13/2011	Email	URS	Received KMZ file
161	Verizon - Telecom	10/25/2011	Mail	URS	Received 30 facility maps.
162	Verizon - Telecom	10/31/2011	Letter	URS	Received overview map and letter detail cost of $480 for this request
163	Consolidated Irrigation District	12/20/2011	Letter	URS	Sent 'A' Letter
164	J. G. Boswell Company	12/20/2011	Letter	URS	Sent 'A' Letter
165	Kinder Morgan	12/20/2011	Letter	URS	Sent 'A' Letter
166	King County	12/20/2011	Letter	URS	Sent 'A' Letter
167	Kings County Water District	12/20/2011	Letter	URS	Sent 'A' Letter
168	Kings River Conservation District	12/20/2011	Letter	URS	Sent 'A' Letter
169	Laguna Irrigation District	12/20/2011	Letter	URS	Sent 'A' Letter
170	Lakeside Irrigation District	12/20/2011	Letter	URS	Sent 'A' Letter
171	Southern California Edison	12/20/2011	Letter	URS	Sent 'A' Letter
172	Southern California Gas Company	12/20/2011	Letter	URS	Sent 'A' Letter
173	Verizon - Telecom	12/20/2011	Letter	URS	Sent 'A' Letter
174	AT&T	12/21/2011	Letter	URS	Sent 'A' Letter
175	City of Hanford	12/21/2011	Letter	URS	Sent 'A' Letter
176	Comcast Cable	12/21/2011	Letter	URS	Sent 'A' Letter
177	Corcoran Irrigation District	12/21/2011	Letter	URS	Sent 'A' Letter
178	Fresno County	12/21/2011	Letter	URS	Sent 'A' Letter
179	Kaweah-Delta Water Conservation District	12/21/2011	Letter	URS	Sent 'A' Letter
180	Liberty Water District	12/21/2011	Letter	URS	Sent 'A' Letter

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No.	Owner	Date	Correspondence Type	Correspondence By	Description
181	Pacific Gas & Electric	12/21/2011	Letter	URS	Sent 'A' Letter
182	Science Applications International Corp (SAIC)	12/21/2011	Letter	URS	Sent 'A' Letter
183	Comcast Cable	12/27/2011	Mail	URS	Received marked up utility sheets.
184	Consolidated Irrigation District	12/28/2011	Email	URS	Received pptx file via email
185	City of Hanford	01/10/2012	Mail	URS	Received water master plan and marked up utility exhibits.
186	Southern California Gas Company	01/10/2012	Email	URS	Have an invoice from 2009 for maps in the amount of $269.01
187	Laguna Irrigation District	01/13/2012	Letter	URS	Received pdfs of facilities via email
188	Science Applications International Corp (SAIC)	01/13/2012	Email	URS	Received PDF via email
189	Alpaugh Irrigation District	10/23/2013	Letter	HMM - T. Grau	Sent 'A' Letter and Exhibits
190	Alta Irrigation District	10/23/2013	Letter	HMM - T. Grau	Sent 'A' Letter and Exhibits
191	Angiola Water District	10/23/2013	Letter	HMM - T. Grau	Sent 'A' Letter and Exhibits
192	County Of Kings	10/23/2013	Letter	HMM - T. Grau	Sent 'A' Letter and Exhibits
193	Fresno Metropolitan Flood Control District	10/23/2013	Letter	HMM - T. Grau	Sent 'A' Letter and Exhibits
194	AT&T	10/24/2013	Letter	HMM - T. Grau	Sent 'A' Letter and Exhibits
195	Atwell Island Irrigation District	10/24/2013	Phone	HMM - T. Ramil	Spoke to Jack Mitchell: Requested for street address to send 'A' Letter [3105 Avenue 42, Alpaugh, CA 93201]. Informed Jack that the 'A' Letter will be mailed out today overnight.
196	Atwell Island Irrigation District	10/24/2013	Letter	HMM - T. Grau	Sent 'A' Letter and Exhibits
197	Chevron	10/24/2013	Letter	HMM - T. Grau	Sent 'A' Letter and Exhibits
198	City of Corcoran	10/24/2013	Letter	HMM - T. Grau	Sent 'A' Letter and Exhibits
199	City of Delano	10/24/2013	Letter	HMM - T. Grau	Sent 'A' Letter and Exhibits
200	City of Fresno	10/24/2013	Letter	HMM - T. Grau	Sent 'A' Letter and Exhibits
201	City of Hanford	10/24/2013	Letter	HMM - T. Grau	Sent 'A' Letter and Exhibits
202	City of Shafter	10/24/2013	Letter	HMM - T. Grau	Sent 'A' Letter and Exhibits
203	City of Wasco	10/24/2013	Letter	HMM - T. Grau	Sent 'A' Letter and Exhibits
204	Comcast Cable	10/24/2013	Letter	HMM - T. Grau	Sent 'A' Letter and Exhibits
205	Consolidated Irrigation District	10/24/2013	Letter	HMM - T. Grau	Sent 'A' Letter and Exhibits
206	Corcoran Irrigation District	10/24/2013	Letter	HMM - T. Grau	Sent 'A' Letter and Exhibits
207	County of Fresno	10/24/2013	Letter	HMM - T. Grau	Sent 'A' Letter and Exhibits
208	County of Kern	10/24/2013	Letter	HMM - T. Grau	Sent 'A' Letter and Exhibits
209	County of Tulare	10/24/2013	Letter	HMM - T. Grau	Sent 'A' Letter and Exhibits
210	Delano-Earlimart Irrigation District	10/24/2013	Letter	HMM - T. Grau	Sent 'A' Letter and Exhibits
211	Fresno Irrigation District	10/24/2013	Letter	HMM - T. Grau	Sent 'A' Letter and Exhibits
212	J. G. Boswell Company	10/24/2013	Letter	HMM - T. Grau	Sent 'A' Letter and Exhibits
213	Kaweah-Delta Water Conservation District	10/24/2013	Letter	HMM - T. Grau	Sent 'A' Letter and Exhibits

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No.	Owner	Date	Correspondence Type	Correspondence By	Description
214	Kinder Morgan	10/24/2013	Letter	HMM - T. Grau	Sent 'A' Letter and Exhibits
215	Kings County Water District	10/24/2013	Letter	HMM - T. Grau	Sent 'A' Letter and Exhibits
216	Kings River Conservation District	10/24/2013	Letter	HMM - T. Grau	Sent 'A' Letter and Exhibits
217	Laguna Irrigation District	10/24/2013	Letter	HMM - T. Grau	Sent 'A' Letter and Exhibits
218	Lakeside Irrigation Water District	10/24/2013	Letter	HMM - T. Grau	Sent 'A' Letter and Exhibits
219	Liberty Water District	10/24/2013	Letter	HMM - T. Grau	Sent 'A' Letter and Exhibits
220	Lower Tule River Irrigation District	10/24/2013	Letter	HMM - T. Grau	Sent 'A' Letter and Exhibits
221	North Kern Water Storage District	10/24/2013	Letter	HMM - T. Grau	Sent 'A' Letter and Exhibits
222	North of River Sanitary District	10/24/2013	Letter	HMM - T. Grau	Sent 'A' Letter and Exhibits
223	Pacific Gas and Electric	10/24/2013	Letter	HMM - T. Grau	Sent 'A' Letter and Exhibits
224	Pixley Irrigation District	10/24/2013	Letter	HMM - T. Grau	Sent 'A' Letter and Exhibits
225	Science Applications International Corporation (SAIC)	10/24/2013	Letter	HMM - T. Grau	Sent 'A' Letter and Exhibits
226	Semitropic Water Storage District	10/24/2013	Letter	HMM - T. Grau	Sent 'A' Letter and Exhibits
227	Shafter-Wasco Irrigation District	10/24/2013	Letter	HMM - T. Grau	Sent 'A' Letter and Exhibits
228	Southern California Edison	10/24/2013	Letter	HMM - T. Grau	Sent 'A' Letter and Exhibits
229	Southern California Gas Company	10/24/2013	Letter	HMM - T. Grau	Sent 'A' Letter and Exhibits
230	Southern San Joaquin Municipal Utility District	10/24/2013	Letter	HMM - T. Grau	Sent 'A' Letter and Exhibits
231	Verizon	10/24/2013	Letter	HMM - T. Grau	Sent 'A' Letter and Exhibits
232	California Water Service Group, Selma District	10/25/2013	Letter	HMM - T. Grau	Sent 'A' Letter and Exhibits
233	California Water Service Group, Visalia District	10/25/2013	Letter	HMM - T. Grau	Sent 'A' Letter and Exhibits
234	Cawelo Water District	10/25/2013	Letter	HMM - T. Grau	Sent 'A' Letter and Exhibits
235	Charter Communication Cable	10/25/2013	Letter	HMM - T. Grau	Sent 'A' Letter and Exhibits
236	City of McFarland	10/25/2013	Letter	HMM - T. Grau	Sent 'A' Letter and Exhibits
237	City of Selma	10/25/2013	Letter	HMM - T. Grau	Sent 'A' Letter and Exhibits
238	City of Tulare	10/25/2013	Letter	HMM - T. Grau	Sent 'A' Letter and Exhibits
239	City of Visalia	10/25/2013	Letter	HMM - T. Grau	Sent 'A' Letter and Exhibits
240	San Luis & Delta-Mendota Water Authority	10/25/2013	Letter	HMM - T. Grau	Sent 'A' Letter and Exhibits
241	Selma Kingsburg Fowler (SFK)	10/25/2013	Letter	HMM - T. Grau	Sent 'A' Letter and Exhibits
242	Tulare Irrigation District	10/25/2013	Letter	HMM - T. Grau	Sent 'A' Letter and Exhibits
243	City of Selma	10/28/2013	Phone	HMM - T. Grau	Joey Dagget left a message (2013-10-28 10:28am): SR 41 and Maiinging Avenue is outside of the sphere of influence. No Utilities
244	County of Kern - Planning & Community Development	10/28/2013	Email	URS - K. Gordon	Received email from Allison Molina in regards to the contact information is out of date. Old contact Ted James no longer works for Kern County. ***The correct information should be Lorelei Oviatt as Director.***

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No.	Owner	Date	Correspondence Type	Correspondence By	Description
245	Pacific Gas and Electric	10/28/2013	Email	URS - K. Gordon	Received email from Elizabeth Proctor in regards to the contact information. ***The PG&E's external HSR contact person is Dale Overbay (DWO4@pge.com).***
246	Laguna Irrigation District	10/29/2013	Phone / Email	URS - K. Gordon	Spoke to Scott Sills (General Manager): We are unable to proceed with any further review of High Speed Rail documents (Utility Letter "A") until the reimbursement agreements for Laguna Irrigation District, Murphy Slough Association and Liberty Canal Company are executed. A confirming email was also sent.
247	Liberty Canal Company	10/29/2013	Phone / Email	URS - K. Gordon	Spoke to Scott Sills (General Manager): We are unable to proceed with any further review of High Speed Rail documents (Utility Letter "A") until the reimbursement agreements for Laguna Irrigation District, Murphy Slough Association and Liberty Canal Company are executed. A confirming email was also sent.
248	Murphy Slough Association	10/29/2013	Phone / Email	URS - K. Gordon	Spoke to Scott Sills (General Manager): We are unable to proceed with any further review of High Speed Rail documents (Utility Letter "A") until the reimbursement agreements for Laguna Irrigation District, Murphy Slough Association and Liberty Canal Company are executed. A confirming email was also sent.
249	Southern California Edison	10/29/2013	Email	URS - K. Gordon	Received email from David S. Loftin in regards to the contact information. Dave mentioned that this type of request would go to our facilities mapping group. ***The contact information for Edison facilities mapping is: Kim Gurule [714-796-9932] or Dawn Boucher [714-796-9950]*** . Jason Arellano [Jason.Arellano@sce.com] may have some input on how to obtain easement information for the rail project.
250	Southern California Edison	10/29/2013	Email	URS - K. Gordon	Received email from David S. Loftin in regards to the contact information. ***Please "do not" contact the group I had directed you to. It appears they have done a part of this work already, and there will be another group involved to help assist with these requests. I will need some time to find that information, please contact me in two weeks, and I should have some information for you.***
251	AC Square, Inc.	10/30/2013	Email	HMM - T. Grau	Received email from Craig Cordova (Designer). **We are the construction contractors for Comcast and received the paper maps for the HSR project areas to identify Comcast facilities. Is it possible to get the CAD files or just the layer with the Sheet Limit and Numbers?** Awaiting on direction from PMT on how to respond to the below request
252	J.G. Boswell Company	10/30/2013	Email	HMM - T. Grau	Received email from Dennis C. Tristao (Environmental Services Manager): High Speed Rail authority has not completed our HSR Cooperative Agreement contract 13-51 with J.G. Boswell Company. Until that contract is completed and executed we are hesitant to complete the extensive detailed work outlined in your request. In any event, attached to the letter was one figure page and nineteen attached exhibit pages. For our analysis to be completed we require the figures and exhibits to be provided in pdf files, to scale, in addition to the hard copy prints. We overlay these scaled prints to our maps to determine location of utility services. Your letter requested completion of this project within thirty days of receipt. We respectfully request at least 90 days after execution of the HSR Cooperative Agreement contract to analyze these maps. We may in all likelihood require the assistance of a contractor to complete the requested analysis and the selection process for a contractor may take 30 days itself.
253	North of River Sanitary District	10/30/2013	Phone	HMM - T. Grau	LaRue Griffin [661.399.6411] left a message (2013-10-30 11:53am): WS1 alignment Sewer

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No.	Owner	Date	Correspondence Type	Correspondence By	Description
254	North of River Sanitary District	10/30/2013	Phone	HMM - T. Grau	Spoke to LaRue Griffin (3:15pm): Plans of interceptor sewer along Santa Fe Way between 7th Standard Road and Kratzmeyer Road (WS1 Exhibits 33-37). Also have plans or future expansion. LaRue indicated that he will email as-built drawings to save marking up maps and having to mail them.
255	County of Fresno	10/31/2013	Phone	HMM - T. Grau	John Robinson [559.600.4527] left a message (2013-10-31 08:46am): Received 'A' Letter Package
256	County of Fresno	10/31/2013	Phone	HMM - T. Grau	Spoke to John Robinson (10:15am): County does not have utilities of any magnitude. May have some small community service districts -- will advise on them. JV Team clarified this request was solely directed at utilities and not roadway ROWs. John will get back to the JV Team and advise on other possible agencies.
257	J.G. Boswell Company	10/31/2013	Phone	HMM - T. Grau	Spoke to Dennis C. Tristao (9:00am) in regards to Exhibit 2 (Nevada Avenue). SW corner pasture ground - signed long term lease for a solar facility in this area. First phase to the east has been constructed.
258	Kings River Conservation District	11/01/2013	Phone	HMM - T. Grau	Left voicemail for Steve Stadler.
259	Kings River Conservation District	11/04/2013	Phone	HMM - T. Grau	Spoke to Steve Stadler. Stadler said it is possible that the cover letter got separated on his end. Now that the 3rd party agreement has been signed, the district will be more active. Stadler mentioned that he wanted to wait until after the meeting that is taking place on Nov. 14th to respond to the 'A' Letter.
260	Southern California Gas Company	11/04/2013	Email	HMM - T. Grau	Received email from Chad Mueller (Planning Associate) in regards to the 'A' Letter request. I have composed a file containing the missing utility maps and will be sending you a CD shortly.
261	Kings River Conservation District	11/04/2013	Phone / Email	HMM - T. Grau	Sent email to Steve Stadler confirming telephone conversation
262	Southern California Gas Company	11/04/2013	Email	HMM - T. Grau	Received email from Chad Mueller (Planning Associate) in regards previous email discussing a possible FTP site to assist in delivering maps.
263	North of River Sanitary District	11/05/2013	Email	HMM - T. Grau	Received email from LaRue Griffin: Per previous discussion, as-built drawings were emailed regarding plans of interceptor sewer along Santa Fe Way between 7th Standard Road and Kratzmeyer Road (WS1 Exhibits 33-37).
264	PG&E	11/05/2013	Email	HMM - T. Grau	Received email from Dale Overbay : I put a couple of links to PG&E's service territory maps below. I will also get the facility maps to you as soon as I can.
265	Verizon	11/05/2013	Email	URS - K. Gordon	Received email from Larry Vail (Verizon Supervisor - Network Engineering and Operations for Camarillo, Reedley, Santa Barbara, Santa Maria) indicating "all or most of requested information has previously been forwarded to Ron Price (PMT). Verizon cannot spend additional time on HSR project without executed 3rd Party Agreement.
266	Southern California Gas Company	11/06/2013	Phone	HMM - T. Ramil	Left Voicemail for Chad Mueller: Requested for CAD or GIS of the pdf maps supplied.
267	J.G. Boswell Company	11/07/2013	Email	HMM - T. Ramil	Sent email to Dennis Tristao: Sent requested scaled pdf file of the C2 'A' Letter Map Exhibits.
268	AC Square, Inc.	11/08/2013	Email	HMM - T. Ramil	Sent email to Craig Cordova: Sent requested CAD file containing the sheet limits of the 'A' Letter Map Exhibits.
269	City of Visalia	11/08/2013	Email	HMM - T. Grau	Received email from Jason Huckleberry (Engineering Development Manager): The City of Visalia does not have any existing utilities within the revised high speed rail alignment. The current rail alignment is some 9.5 miles west of the Visalia city limits.

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270	Lakeside Irrigation Water District	11/08/2013	Email	URS - K. Gordon	Received email from R.L. Schafer (R.L. Schafer & Associates): the service area lands of the Lakeside Ditch Company are not in favor of the High-Speed Rail, the Lakeside Irrigation Water District (LIWD) does not have a Reimbursement Agreement for costs incurred as requested by your letter, and the staff of LIWD are not authorized to respond to your letter.
271	Verizon	11/08/2013	Phone	HMM - T. Grau	Spoke to Larry Vail: Earlier Verizon provided data for their system along HST (March this year) Corcoran, Fowler, and McFarland exchanges. Mr. Vail sent 'A' Letter to his Reedley Office. Paula Rivera left message for Mr. Vail re: 3rd party agreement. Incurred quite an expense, cannot go further without a 3rd party agreement.
272	AC Square, Inc. (Comcast)	11/11/2013	Email	HMM - T. Ramil	Received email from Craig Cordova: Thank you for sending the CAD Layers! We will forward the requested information for Comcast Facilities when complete.
273	Pacific Gas and Electric	11/11/2013	Email	HMM - T. Grau	Sent email to Dale Overbay: Sent requested GIS Shape Files containing the proposed alignment ROWs and roadway work envelope associated with 'A' Letter Map Exhibits.
274	Corcoran Irrigation District	11/12/2013	Email	URS - K. Gordon	Received email from Gene Kilgore (Assistant Manager): Unfortunately CID, as of yet, has not received a reimbursement agreement from the HSRA. I would be glad to provide you all the information CID has regarding your request, however, I understand CID cannot be reimbursed for time spent on compiling the information you requested without this agreement.
275	Southern California Gas Company	11/12/2013	Phone	HMM - T. Ramil	Spoke to Chad Mueller: Would like to send CAD/GIS files, but needs to get authorization from the Tower (headquarters). He wont be able to look into it until next week. Believe no agreement is in place. Once in place, a meeting can be held to discuss work.
276	City of Fresno	11/12/2013	Mail	HMM - T. Grau	Received a letter from Scott Mozier (City Engineer/Assistant Public Works Director): The subject location is outside of the City of Fresno and no city owned utilities are present.
277	Kaweah-Delta Water Conservation District	11/12/2013	Mail	HMM - T. Grau	Received a letter from Larry Dotson (Senior Engineer): There is no conflict with any District property, easements, or facilities for the presented alignments.
278	Fresno Irrigation District	11/14/2013	Phone	HMM - T. Grau	Left Voicemail for William Stretch: Requested status on 'A' Letter response and an opportunity to come over and meet relative to 'A' Letter Exhibits.
279	Southern California Edison	11/14/2013	Phone	HMM - T. Grau	Left Voicemail for David Lofton: Requested status on 'A' Letter response and an opportunity to come over and meet relative to 'A' Letter Exhibits.
280	AT&T	11/15/2013	Email	HMM - C. Ramirez	Sent 'A' letter follow-up e-mail to Sabrina Lower-Hunt at AT&T.
281	AT&T	11/15/2013	Phone	HMM - C. Ramirez	Tried to leave VM for Sabrina Lower-Hunt at AT&T (775) 851-6096. Number disconnected
282	Fresno Irrigation District	11/15/2013	Phone	HMM - T. Grau	Spoke to Felix Aquilar: Should have a letter response mid next week. will look into setting up a meeting to discuss the relocation on Nov 26th.
283	Science International Engineers	11/15/2013	Phone	HMM - C. Ramirez	Left voice mail for Thomas Burns @ SAIC (916) 979-3478 following up on status of 'A' letter response.
284	Southern California Edison	11/18/2013	Email	HMM - T. Grau	Sent email to David Lofton: Requested existing utility locations along the CP 2/3 alignment as well as the contact person SCE has assigned to this section.
285	Southern California Edison	11/18/2013	Email	HMM - T. Grau	Received email from David Lofton: I will not be the contact for this project, if I get any information I will let you know.
286	City of Hanford	11/19/2013	Mail	HMM - T. Grau	Received a letter from John Doyel (City Engineer, Deputy Public Works Director): A 6" diameter water service pipeline owned by Kit Carson School is currently under construction within the E Lacey Blvd near the intersection of the "H" HST Alignment. When complete the city will supply potable water from the city system to the school. If an HST Regional Station Facility will be constructed on the 'H' Alignment in the vicinity of the City of Hanford, it is anticipated that the city will be required to serve the Station.

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287	Fresno Irrigation District	11/19/2013	Phone	HMM - T. Grau	Spoke with Felix Vaquilar following receipt of meeting invite for Tuesday Nov. 26, 2013 to confirm that HMM will provide call-in details and will send invite to PMT and PMT 3rd Party Agreements (Tony Valdez).
288	PG&E	11/19/2013	Phone	HMM - T. Grau	Mr. Overbay provided some background information on the Kingsburg-Waukena and Kingsburg-Corcoran 115 kV lines which require relocation for approximately 4.5 miles between approximate Stations 1745+00 and 1981+00 on the H alignment and general criteria and approach PG&E would be looking for relative to relocation. Will summarize in Mtg. Notes.
289	City of Shafter	11/21/2013	Phone	HMM - T. Grau	Received voicemail from Michael James (Public Works Director): Comparing the city as-built sheets with the current HST alignment. Will not be able to make the 30 day request. Looking at completing by mid-December.
290	Chevron	11/25/2013	Mail	HMM - T. Grau	Received a letter from Mike Oliphant: Chevron Environmental Management Company has previously submitted responses to this request in letters dated 9/7/11 and 12/17/12.
291	Chevron	11/25/2013	Phone	HMM - C. Ramirez	Spoke to Mike Oliphant : . A response to utility 'A' letter will be mailed today or tomorrow.
292	City of Corcoran	11/25/2013	Phone	HMM - C. Ramirez	Spoke to Steve Kroeker (Director of Public Works): He received the Utility A letter and maps. Steve is waiting for the City to return a reimbursement agreement to CHSRA. The 'A' letter exhibit maps RC sent are missing several water lines, including an important one at 5.5 Avenue. Steve will check what he can do to provide additional mapping prior to an agreement. RC to call back in a week. Note: The City engineer recently retired.
293	Kinder Morgan	11/25/2013	Phone	HMM - T. Grau	Received voicemail from John McGinnis: Advised Utility Team to call Mr. Lies.
294	Kinder Morgan	11/25/2013	Phone	HMM - T. Grau	Left Voicemail for Mr. Lies: Requesting the status of their response.
295	Kinder Morgan	11/25/2013	Phone	HMM - T. Grau	Spoke to Gregg Lies: Does not believe Kinder Morgan has any facilities in the CP 2/3 area. They are up in Fresno in BNSF or UPRR ROWs, then go to their facility south of Fresno and continue to a military facility.
296	Level 3 Communications	11/25/2013	Phone	HMM - T. Grau	Left Voicemail for Sam Isaacson: Initiate communication on fiber optic relocations for CP 2/3.
297	PG&E	11/25/2013	Phone	HMM - T. Grau	Spoke to Dale Overbay: Can Meet with HMM Monday Dec 2nd at the Sacramento Office.
298	Semitropic Water Storage District	11/25/2013	Phone	HMM - C. Ramirez	Spoke to Alicia: RC explained to her that we were seeking a response to the utility 'A' letter sent to them last month. Alicia will convey the message to Wil Boshman (General Manager).
299	Fresno Irrigation District	11/26/2013	Mail	HMM - T. Grau	Received a letter from William Stretch (Assistant General Manager of Operations): FID has reviewed the CHSRA Utility relocation plans submitted. Comments provided are listed and are in addition to those previously sent 10/13/11, 5/17/12, and 11/13/12.
300	Level 3 Communications	11/26/2013	Phone	HMM - T. Grau	Left Voicemail for Sam Isaacson: Initiate communication on fiber optic relocations for CP 2/3.
301	PG&E	11/26/2013	Email	HMM - T. Grau	Received email from Dale Overbay : Finished identifying which facility plats are appropriate to the HST CP 2/3 alignment. Now staff has to actually gather them, so they're working on it but do not have a definitive timeframe. I'll let you know when I hear more. As for the protocol for relocations, PG&E will be performing all of the relocation work. PG&E may bring in their own contractors, but for all intents and purposes, PG&E is going to do all the relocation work themselves.
302	Fresno Irrigation District	11/27/2013	Email	HMM - T. Grau	Received email from Felix Vaquilar : Attached are FID record drawings for canals north of American Avenue and south of the Downtown Fresno.
303	Kinder Morgan	11/27/2013	Mail	HMM - T. Grau	Received a letter from Gregg Lies (Sr. Project Manager): Kinder Morgan has no conflict with the proposed alignments and alternatives.
304	AC Square, Inc. (Comcast)	12/03/2013	Email	HMM - T. Grau	Sent email to Craig Cordova: request for an up to date phone number and request on the status of their response.

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305	AC Square, Inc. (Comcast)	12/03/2013	Email	HMM - T. Grau	Received email from Craig Cordova: His Mobile Number is 559-999-5169.
306	J.G. Boswell Company	12/03/2013	Email	HMM - T. Grau	Sent email to Dennis Tristao: Confirm Telephone conversation earlier in the day and request on the status of their response.
307	J.G. Boswell Company	12/03/2013	Phone	HMM - T. Grau	Spoke to Dennis Tristao: Mr. Tristao thanked utility team for following up with the electronic copies of the PDF exhibits. He indicated that Boswell had returned the third party agreement to the CHSRA and was awaiting a reply. Cannot devote substantial effort to responding until their 3rd Party Agreement is in place.
308	PG&E	12/03/2013	Email	HMM - T. Grau	Received email from Dale Overbay : Easement widths PG&E has come up with for HV transmission lines. PG&E will be looking for 100' instead of 60' rights-of-way. Dale also looking into the rest of the Action Items from our December 2nd meeting.
309	City of Corcoran	12/03/2013	Phone	HMM - C. Ramirez	Left VM for Steve Kroeker, Director of DPW, following up on last week's call relative to City's responding to 'A' letter.
310	Semitropic Water Storage District	12/03/2013	Phone	HMM - C. Ramirez	Spoke with Karen at Semitropic Water District. She will convey RC 'A' letter follow-up message to the new GM (Jason Gianquinto). Jason is at a conference this week.
311	Southern California Edison	12/03/2013	Phone	HMM - T. Grau	Left VM for Ken Spears requesting help with identifying a contact person at SCE for responding to RC 'A' letter for FB CP 2/3.
312	Southern California Edison	12/03/2013	Email	HMM - T. Grau	Sent e-mail to Ken Spears as follow-up to VM left earlier in the day.
313	City of Corcoran	12/04/2013	Phone	HMM - C. Ramirez	Spoke with Steve Kroeker: He indicated that City's utilities are properly depicted on the Utility Letter A mapping he received last month. The maps are missing at least two waterlines which are owned and maintained by Kings County.
314	Kings County	12/04/2013	Phone	HMM - C. Ramirez	Spoke with Kevin McAlister (Director of Public Works): Mr. McAlister acknowledged receipt of Utility Letter A and mapping. He and staff hope to prepare a formal response within one week. Kevin mentioned that the County may have a rare storm drain facility, but does not own/maintain water and sewer facilities.
315	Southern California Edison	12/04/2013	Email	HMM - T. Grau	Received email from Ken Spear: I am now the SCE lead for the CHSR project. I would appreciate you sending me copies of the maps and diagrams referenced in your "A" letter. I am working with Tony Valdez of P-B on behalf of the CHSR Authority to complete a reimbursement agreement to cover costs of SCE in researching and providing various data requests (re existing facilities, real property rights, etc.) from the Authority. It appears that you are requesting the same type of information contemplated in the scope of the reimbursement agreement Tony and I are working to complete.
316	Southern California Edison	12/04/2013	Email	HMM - T. Grau	Sent email to Ken Spear: I will have Teddy Ramil of our office send you an electronic version of the exhibits that accompanied the copy of the 'A' letter which we forwarded to you yesterday. As for our relationship with Tony's office, HMM is part of a joint venture (with URS and Arup) design team, referred to as the Regional Consultant (RC), for the Fresno to Bakersfield section of the CHSR project and we report to a Program Management/Engineering Management Team (PMT/EMT) who in turn report to the CHSRA. PMT/EMT reviews our work product on behalf of the CHSRA. Tony is with the third party agreements arm of the PMT.
317	AC Square, Inc. (Comcast)	12/04/2013	Email	HMM - T. Grau	Received email from Craig Cordova: Met with Comcast this morning and will update and forward the information by tomorrow afternoon.

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318	AC Square, Inc. (Comcast)	12/05/2013	Email	HMM - T. Grau	Received email from Craig Cordova: The attached are the Comcast facilities locations in the CA HST project areas.
319	PG&E	12/05/2013	Email	HMM - T. Grau	Received email from Dale Overbay : A tower being raised over 50' is not really an issue. If the tower's total height exceeds 200', then we have to abide by FAA regulations, but I don't think we'll reach that high. We will be replacing the 4x4 lattice towers with Tubular Steel Poles (TSP). If we do have any towers within the flight path or approach of an airport, we may not be able to raise them at all, so that is something to consider. The original land rights for the transmission line were acquired in the late 1920's and the line was constructed shortly thereafter. I still don't know why that certain portion of the line was relocated in the 1960's.
320	Southern California Edison	12/10/2013	Email	HMM - T. Ramil	Sent email to Ken Spear: Per your requested, I have attached a GIS shape file containing the line work for the HST alignment, alignment right-of-way, and roadway work associated with the existing utility location map exhibits.
321	Level 3 Communications	12/10/2013	Phone	HMM - T. Grau	Left Voicemail for Sam Isaacson: Initiate communication relative to relocation work in the Fresno area for CP 2/3.
322	AT&T	12/11/2013	Email	HMM - C. Ramirez	Sent email to Geneva McJunkin looking for information about AT&T mapping along the Central Valley.
323	AT&T	12/11/2013	Email	HMM - C. Ramirez	Received email from Geneva McJunkin: I have your email as sent to me below requesting AT&T's facility maps. However, before I can process your request, I will need the 3 attached forms acknowledge, signed and returned to me. In addition, I will need to know the scope of your project. Please sent a sketch map showing the streets involved with this request.
324	Semitropic Water Storage District	12/13/2013	Phone	HMM - C. Ramirez	Spoke with Jason Gianquinto (New General Manager): He will review the Utility Letter A and respond by early next week.
325	PG&E	12/16/2013	Email	HMM - T. Grau	Sent email to Dale Overbay : We have worked up a concept realignment for the Kingsburg – Corcoran 115 kV line between Excelsior Road and Rt. 198 south of Hanford. We have a meeting set for Wednesday to review it and a number of our other plans with the staff at the High Speed Rail Program Management Team (PMT). After that I would like to send the concept drawings down to PG&E to review and comment on. Looking ahead a bit, our next step will be to develop a preliminary cost estimate based on the realignment. Since the HV lines are not a typical utility where we have access to bid results from similar projects, I was wondering if PG&E could provide some rough cost estimating data.
326	PG&E	12/16/2013	Email	HMM - T. Grau	Received email from Dale Overbay : I'll see what kind of information I can come up with. In the meantime, I've got the facility plats burned onto a dvd, so I'll be mailing that to you today.
327	PG&E	12/18/2013	Email	HMM - T. Grau	Sent email to Dale Overbay: Can you tell us how tall the support structures for the above HV line are?
328	PG&E	12/20/2013	Email	HMM - T. Grau	Received email from Dale Overbay : Here's what I got from our Engineer. He's not 100% sure, but he believes they were designed to be 79' tall. 54' to the bottom phase attachment, 10' phase spacing for two more phases, then 5' to the top of the tower.

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329	PG&E	12/20/2013	Email	HMM - T. Ramil	Sent email to Dale Overbay : Thanks for the DVD. I have been reviewing the contents of the DVD and noticed a possible problem with a couple of the electrical plats. The following plats do not have any distribution line work on them. Is the due to PG&E having no distribution lines in the area or was the layer accidently turned off? Here are the plats in question: 18223, 18224, 18225, 18226, 19221, and 19222. I also noticed that the HV lines are not included, but have some notes and tower locations associated for them. Is this layer also turned off on the plats or do I use the old line scans as our most accurate information for the HV lines.
330	PG&E	12/23/2013	Email	HMM - T. Ramil	Received email from Dale Overbay : We recently had a contractor take all of our old facility plats and convert them to the new format. Unfortunately, they didn't transfer the transmission line locations, but those don't change much so the info you have should still be current. As far as the blank plats, they look correct. The plats look like they are in the Hanford area, so that is SoCal Edison territory.
331	Verizon	01/08/2014	Phone	HMM - T. Grau	Left Voicemail for Larry Vail: Requesting clarification of Verizon and GTE sharing of infrastructure.
332	Verizon	01/09/2014	Phone	HMM - T. Grau	Received Voicemail from Larry Vail: Just received agreement from CHSRA. Needs to have legal go through. Once signed and payment received, will follow through responding to A letter. Will let us know when they are in position to respond.
333	Semitropic Water Storage District	01/22/2014	Email	HMM - T. Ramil	Sent email to Isela Medina (GEI Consultants): Sent a GIS shape file containing the line work for the HST alignment, alignment right-of-way, and roadway work associated with the existing utility location map exhibits. Districts use GEI as their engineering consultant and have authorized the information to be sent directly to GEI. Request made by Tony Valdez (PMT).
334	Shafter-Wasco Irrigation District	01/22/2014	Email	HMM - T. Ramil	Sent email to Isela Medina (GEI Consultants): Sent a GIS shape file containing the line work for the HST alignment, alignment right-of-way, and roadway work associated with the existing utility location map exhibits. Districts use GEI as their engineering consultant and have authorized the information to be sent directly to GEI. Request made by Tony Valdez (PMT).
335	City of Corcoran	01/23/2014	Phone	HMM - C. Ramirez	Left voice mail for Steve Kroeker.
336	Corcoran Irrigation District	01/23/2014	Phone	HMM - C. Ramirez	I spoke with Shirley at C.I.D. She informed me that Carlo Wilcox has recently retired. The new General Manager is Gene Kilgore. Gene called back as I was typing this initial note. C.I.D. provided a signed agreement to HSR on 12/20/2013. He will review Letter "A" and provide mapping after receipt of a reimbursable agreement.
337	City of Corcoran	01/28/2014	Email	HMM - T. Grau	Sent email to Steve Kroeker: Sent a meeting notice for Corcoran ID and City of Corcoran meeting being held on January 30th.
338	Corcoran Irrigation District	01/28/2014	Email	HMM - T. Grau	Sent email to Gene Kilgore: Sent a meeting notice for Corcoran ID and City of Corcoran meeting being held on January 30th.
339	City of Corcoran	01/28/2014	Email	HMM - T. Grau	Received email from Steve Kroeker : Due to the number of folks attending this meeting and since there are others wanting to participate in a conference call we're going to change the location of the meeting to the downstairs conference room at Corcoran City Hall.

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340	Alpaugh Irrigation District	01/28/2014	Phone	HMM - T. Grau	Spoke to Secretary at the District. The district does not have a website and they do not accept mail at the physical address. For sending mail to Alpaugh ID, use Post Office Box 129, Alpaugh, CA 93201. For sending mail to Atwell Island ID, use Post Office Box 220, Alpaugh, CA 93201. Main Reservoir is located west of SR 43 at Road 56. Received executed agreements from CHSRA.
341	City of Corcoran	02/11/2014	Email	HMM - T. Grau	Sent email to Steve Kroeker: Thanks again for hosting the meeting and lending us the Water and Sewer maps for the City. I was looking for your insight on a couple of issues. *[A list of 6 issues sent to Steve for comments. The issues were verification of water pipes/material and sewer pump station.]*
342	City of Corcoran	02/11/2014	Email	HMM - T. Grau	Received email from Steve Kroeker: Sent comments on the 6 issues previously emailed.
343	City of Corcoran	02/11/2014	Email	HMM - T. Grau	Sent email to Steve Kroeker: For AC that requires encasement or relocation to accommodate HST, would the DPW be looking for the pipe to be replaced with PVC then? Anything you have on records for the PS on the WTP site would be a help.
344	City of Corcoran	02/11/2014	Email	HMM - T. Grau	Received email from Steve Kroeker: Responded to previous question. Anywhere they have to encase, relocate, remove and replace or whatever we would prefer them to replace the A/C with PVC every time. We'll see what we can do on the plans, if someone is in the area tell them to stop by and they can pick them up.
345	City of Corcoran	02/12/2014	Email	HMM - T. Grau	Sent email to Steve Kroeker: Can your guys double check any records (as-builts or maybe repair logs?) to verify the 16-inch and 24-inch pipe materials on the water mains. I know a lot of AC pipe was used for awhile in the water industry, but in my experience, when the pipe diameters got up in the 16-inch and above range, AC pipe was avoided. Sewer is another matter. Have seen a lot of the larger diameter AC mains.
346	City of Corcoran	02/12/2014	Email	HMM - T. Grau	Received email from Steve Kroeker: Responded to previous question. We pulled that information off of the Water Treatment Plant plans but we'll check again and see if we can find that information from another source somewhere. It might take some time but we'll get it for you as soon as we can.
347	PG&E	02/12/2014	Email	HMM - T. Grau	Sent email to Dale Overbay: Have the 3rd Party Agreements between CHSRA and PG&E been executed yet? For relocations of 12 kV and lower voltages, is conventional practice to use the next existing pole beyond the relocation point as the splice-in or tie-in point?
348	PG&E	02/12/2014	Email	HMM - T. Grau	Received email from Dale Overbay: Responded to previous questions. We're meeting with the CHSRA on Friday. The Master Agreement will likely be ready for signature and we will continue work on the Utility Agreement template. For distribution poles, we will most likely install new poles at the edge of the conflict rather than go back to an existing pole.

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349	PG&E	02/12/2014	Email	HMM - T. Grau	Sent email to Dale Overbay: If PG&E installs new poles at the edge of the conflict area, i.e., cutting existing wires mid-span between existing poles, is new cable then strung from the new poles back to the existing poles bracketing the conflict area, or is typical protocol to cut and splice the existing cable and reconnect to the new poles? Also, the HSR design guidelines for relocating lines along roadways that now have grade crossings with BNSF favor installing the lines within the new bridge decks for the roadway overpasses which will span both BNSF and the HST rather than performing the relocation in a single operation placing the new pole line along the toe of the roadway overpass embankment and undergrounding below HST and BNSF.
350	PG&E	02/12/2014	Email	HMM - T. Grau	Received email from Dale Overbay: Responded to previous questions. What I believe happens is we intersect poles in line with the existing overhead facilities, attach risers and underground facilities and anchors to hold the tension, switch over the power, then cut and remove the lines and poles in between. We still have not started our design process for the first phase, but I believe our preference is to not be within the bridge structures.
351	Southern California Edison	02/12/2014	Phone	HMM - T. Grau	Spoke to Ken Spears: SCE sent back draft agreement to Tony Valdez. SCE in basic agreement with draft letter of understanding but have some concerns and will look to get those resolved shortly. The agreement will be between SCE and the Authority, but SCE will invoice the RC. SCE mentioned that they have project an approximate cost of $50k-$75k for 'A' letter response/interaction with RC on utilities for CP 2-3 and CP-4.
352	AT&T	02/12/2014	Phone	HMM - T. Grau	Left Voicemail for Josh Mathisen (office 916.972.3711): Requested he call back on information needed to get the 'A' letter response moving forward.
353	Alpaugh Irrigation District	02/13/2014	Phone	HMM - T. Ramil	Spoke to Heather B. (559.949.8323): obtain physical and mailing address for the 'A' Letter package delivery
354	Atwell Island Irrigation District	02/13/2014	Phone	HMM - T. Ramil	Spoke to Heather B. (559.949.8323): obtain physical and mailing address for the 'A' Letter package delivery
355	Alpaugh Irrigation District	02/13/2014	Mail	HMM - T. Ramil	Resent 'A' Letter and Exhibits to Kevin Couch (General Manager)
356	Atwell Island Irrigation District	02/13/2014	Mail	HMM - T. Ramil	Resent 'A' Letter and Exhibits to Kevin Couch (General Manager)
357	AT&T	02/13/2014	Phone	HMM - T. Grau	Left Voicemail for Josh Mathisen (cell 916.521.5105): Follow-up with a detailed message pertaining to yesterdays office phone message.
358	Central Valley Independent Network (CVIN)	02/13/2014	Phone	HMM - T. Ramil	Left message for Mike Stewart (559.554.9111): Requested he call back on information needed to discuss Utility information from company.
359	Central Valley Independent Network (CVIN)	02/13/2014	Phone	HMM - T. Ramil	Spoke to Fredric Ritter (559.307.1320): will be CVIN Main contact. Would like DVD with hard copy and electronic versions for use.
360	City of Shafter	02/18/2014	Mail	HMM - T. Grau	Received CD-ROM from Michael James (Public Works Director): Attached are City of Shafter record drawings for seven misc. projects located within the proposed CA HST project areas.
361	Verizon	02/18/2014	Phone	HMM - T. Grau	Spoke to Larry Vail: Needs to follow up with Verizon attorney on review of CHSRA 3rd party agreement. Prior corporate attorney left Verizon. Has worked on price on developing budget for showing existing. Will check with attorney on progress. GTE and MCI are Verizon by the way of merger/acquisitions. confirmed that on occasion underground telephone is buried copper wire even when in duct bank is not apparent.

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No.	Owner	Date	Correspondence Type	Correspondence By	Description
362	Southern California Edison	02/24/2014	Phone	HMM - T. Grau	Spoke to Ken Spears: Basic terms of agreement with CHRSA require RC to make request to SCE for utility information. Depending on extent of work, SCE may be asking for a deposit. Ken asked if RC has a fund for paying for work. Responded that RC budget had been increased to allow for requests for information from several agencies. SCE still working out details of non-disclosure and other documents which must be signed to allow for responding to "A" letter request. RC expressed concerns that non-disclosure not be too all encompassing. Mr. Spear suggested an email explaining the intended use of the mapping.
363	Southern California Edison	02/24/2014	Email	HMM - T. Grau	Sent email to Ken Spears: Per our conversation this AM relative to the above, the request for infrastructure location information being sought from SCE and other local agencies through the 'A' letter requests is intended for production of engineering drawings for a design/build solicitation to be issued by the California High Speed Rail Authority(CHSRA), which the URS/Arup/HMM Joint Venture (RC) is under contract with. The documents so obtained, and the maps which the Joint Venture produces become the property of the CHSRA.
364	AT&T	02/25/2014	Email	HMM - T. Grau	Sent email to Josh Mathisen: I am writing as a follow-up to a couple of voice mails left relative to our involvement with the California High Speed Rail Authority project. Tony Valdez of the CHSRA Program Management Third Party Agreement Team, suggested I contact you in order to coordinate our information request for mapping of existing AT&T facilities in the Contract Package 2-3 area (south of Fresno to one mile north of the Tulare County/Kern County line.
365	AT&T	02/25/2014	Phone	HMM - T. Grau	Spoke to Josh Mathisen: Josh will forward contact information to Bev Patton (Engineering) and Adam Moeller (ROWs). AT&T has signed 3rd Party agreement and returned it to CHSRA/PMT. once they get a signed copy back, they will be willing to get us requested information. To expedite things, Josh suggested sending a project area map to Bev Patton. Josh thought most of AT&T infrastructure was east of Hwy 99, but not sure.
366	AT&T	02/25/2014	Email	HMM - T. Grau	Received email from Josh Mathisen: Per our conversation, I'll let you know when the master agreement is in place. I've Cc'd Bev Patton and Adam Mohler. They will be the local contacts. Please include them on any project-specific information.
367	AT&T	02/25/2014	Email	HMM - T. Grau	Sent email to Josh Mathisen: We will get an overall map off to Bev so she can start sizing up where conflicts may exist between AT&T and the HSR CP 2-3 alignment. Please let us know the earliest we can start sending more detailed info (either hard copy 11 x17 exhibits or GIS shape files) to obtain the detailed info on existing infrastructure which needs to be depicted on the project Utility Drawings.
368	AT&T	02/26/2014	Email	HMM - T. Grau	Sent email to Josh Mathisen: As a follow-up to my phonecon with Josh Mathisen yesterday, I am forwarding a general map depicting the location and extent of the Contract Package 2-3 area (highlighted in yellow) which we, on behalf of the California High Speed Rail Authority, have requested existing utility information for in order to prepare design/build engineering drawings.
369	Bright House Networks	02/27/2014	Email	HMM - T. Ramil	Sent email to Gregory Eoff: Sent CP4 alignment drawings in PDF format to allow him to mark up the location of their facilities. Request made by Tony Valdez (PMT).

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370	Consolidated Irrigation District	02/28/2014	Phone	HMM - C. Ramirez	Spoke to Lupe Chavez: Iowa Ditch at Manning Avenue. Mr. Chavez confirmed that the ditch has been converted to an underground pipeline as it crosses BNSF Tracks; He is uncertain, but suspects the pipeline is 24-36" dia.
371	AT&T	03/05/2014	Phone	HMM - T. Grau	Left message for Josh Mathisen: message regarding status on understanding of agreement. Execution of CHSRA Master Agreement not a prerequisite per PMT.
372	Southern California Edison	03/05/2014	Phone	HMM - T. Grau	Left message for Ken Spear: message regarding status on understanding of agreement. Execution of CHSRA Master Agreement not a prerequisite per PMT.
373	Verizon	03/05/2014	Phone	HMM - T. Grau	Left message for Larry Vail: message regarding status on Verizon/CHSRA agreement.
374	Verizon	03/05/2014	Phone	HMM - T. Grau	Spoke to Larry Vail: Larry has a call into Tony Valdez; reimbursement agreement is with Verizon attorney to review. Can look at CUP maps. Will do that much.
375	Alpaugh Irrigation District	03/07/2014	Letter	HMM - T. Grau	Marked up A letter exhibits showing Alpaugh Irrigation District facilities.
376	Vaughn Water Company	03/21/2014	Phone	HMM - T. Ramil	Spoke to Horacio Perez: northern end of Company is ~5 miles south of 7th Standard Road; he would like info (CAD and Hard Copy) on HST and work area so they can look at possible impacts.
377	GEI Consultants	03/21/2014	Phone	HMM - T. Ramil	Spoke to Dan Guth (c/o of Semitropics WSD and Shafter Wasco ID): discussion of the shape file contents; requested alignment station on HST and Roadway; requested all electronic files for the FB section alignment and roadway work; explained that the data will need to be requested in email for approvals to be requested.
378	Central Valley Independent Network (CVIN)	03/21/2014	E-mail	HMM - T. Ramil	Received makred up A letter exhibits and related CVIN infrastructure mapping mapping
379	Vaughn Water Company	03/24/2014	Mail	HMM - T. Ramil	Sent 'A' Letter and Exhibits
380	Vaughn Water Company	03/25/2014	Email	HMM - T. Ramil	Sent email to Horacio Perez: Sent a GIS shape file containing the line work for the HST alignment, alignment right-of-way, and roadway work associated with the existing utility location map exhibits.
381	Central Valley Independent Network (CVIN)	03/25/2014	Phone	HMM - T. Ramil	Spoke to Fredric Ritter (559.307.1320): Work area north of Corcoran and south of Kansas Ave was constructed with Verizon on a joint trench and Caltrans permit.
382	Alpaugh Irrigation District	03/25/2014	Phone	HMM - T. Ramil	Spoke to Suzanna (559.949.5323): Kevin Couch is no longer with Alpaugh as well as Admin Asst. New GM is James "Jim" Atwell. Left Message for Jim to Call back in regards to Utility 'A' Letter and Exhibits.
383	Bright House Networks	03/25/2014	Phone	HMM - T. Ramil	Left message for Gregory Eoff (661.323.4892): Requested a possible status update on Utility 'A' Letter and exhibits response.
384	Bright House Networks	03/25/2014	Phone	HMM - T. Ramil	Spoke with Gregory Eoff (661.395.3351): Requested that the RC resend the FTP site info regarding the 'A' Letter Exhibits. Sent email with new FTP site.
385	Bright House Networks	03/26/2014	Email	HMM - T. Ramil	Received GIS files
386	Alpaugh Irrigation District	03/25/2014	Phone	HMM - T. Ramil	Spoke to James Atwell: He just took over as GM and is unfamiliar of what Kevin was doing with the HST Regional Consultants. Mentioned that the RC's should make a visit to the District to discuss the utilities the District has nearby the HST Alignment. Will call back with possible dates that the RC will have available to visit District and discuss potential impacts.
387	AT&T	03/26/2014	E-mail	HMM - T. Grau	Bev Patton forwarded e-mail address for Geneva McJunkin, Right of Way Manager (gr7434@us.att.com) and Clem Cole, area Manager, Network Process & Quality (Jc9851@us.att.com).

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388	AT&T	03/27/2014	E-mail	HMM - T. Grau	Forwarded GIS shape files for the CP 2-3 and CP 4 A letter exhibits for AT&T GIS consultant's use in identifying the infrastructure mapping relevant to these two HSR contract packages.
389	Sempra	03/31/2014	E-mail	HMM - T. Grau	esponded to inquiry on gas mains in the vicinity of Lacy Blvd. and the Hanford Station. Forwarded mapping for that area.
390	AT&T	04/02/2014	E-mail	HMM - T. Grau	C. Mueller of Sempra had no comments on 5/30/2014 Meeting Notes and no update on 3rd Party Agreement status.
391	Sempra	04/08/2014	E-mail	HMM - T. Grau	Forwarded draft CUP package for CP 2-3 highlighting plotted Sempra facilities and requesting Sempra review and comment.
392	Alpaugh Irrigation District	04/08/2014	Mail	HMM - C. Ramirez	Received response to 'A' letter along with red lined mark-ups. Transposed relevant information to composite utility plans.
393	Lakeside Irrigation Water District	04/08/2014	Mail	HMM - C. Ramirez	Received response to 'A' letter along with District Map.
394	SCE	04/09/2014	E-mail	HMM - T. Grau	Update on status of negotiation of 3rd Party reimbursement agreements. Still in progress, but 'getting closer'.
395	GEI Consultants	04/09/2014	Phone	HMM - C. Ramirez	Left VM for Isela Medina (661-716-3016) regarding information for **Semitropics WD and Shafter-Wasco ID**. Isela called back and informed me that they have authorization and information to move forward with all the mapping. They have made significant progress during the past 2 weeks. They will also be providing mapping for **North Kern Water Storage District**. Per their agreement with the Authority (CHSR?) information is due by 6/30/2014.
396	Atwell Island Irrigation District	04/09/2014	Phone	HMM - C. Ramirez	This number (559-949-8323) led RC to James Atwell at Alpaugh ID. He only represents Alpaugh ID. Alpaugh ID and Atwell Island ID share some canals but not wells or storage facilities. He suggested that RC contact Kevin Couch. Heather Barajas is no longer with the District.
397	AT&T	04/09/2014	Email	HMM - T. Grau	Requested update on status of AT&T utility mapping cost and delivery estimate from G. McJunkin.
398	Level 3 Communications	04/09/2014	E-mail	HMM - T. Grau	Forwarded draft CUP package for CP 2-3 highlighting plotted Level 3 Communications facilities and requesting Level 3 review and comment.
399	AT&T	04/09/2014	E-mail	HMM - T. Grau	G. McJunkin forwarded cost estimate to research and furnish AT&T infrastructure mapping in GIS format for CP 2-3 and CP 4.
400	Fresno Irrigation District	04/09/2014	E-mail	HMM - T. Grau	Forwarded draft CUP package for CP 2-3 highlighting plotted Fresno Irrigation District facilities and requesting FID's review and comment.
401	City of Corcoran	04/09/2014	E-mail	HMM - T. Grau	Forwarded draft CUP package for CP 2-3 highlighting plotted City of Corcoran facilities and requesting City's review and comment.
402	Comcast Cable	04/09/2014	E-mail	HMM - T. Grau	Forwarded draft CUP package for CP 2-3 to AC Square highlighting plotted Comcast facilities and requesting their review on behalf of Comcast.
403	Lakeside Irrigation District	04/09/2014	E-mail	HMM - T. Grau	Forwarded draft CUP package for CP 2-3 to R.L. Schafer highlighting plotted Lakeside Irrigation District facilities and requesting their review on behalf of Lakeside ID.
404	Consolidated Irrigation District	04/09/2014	E-mail	HMM - T. Grau	Forwarded draft CUP package for CP 2-3 to Consolidated Irrigation District highlighting plotted Consolidated Irrigation District facilities and requesting their review and comment.

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405	AT&T	04/09/2014	E-mail	HMM - T. Grau	Authorized AT&T to proceed with utility mapping preparation per their cost estimate provided earlier in the day.
406	PG&E	04/10/2014	E-mail	HMM - T. Grau	Forwarded entire draft CUP drawing set for CP 2-3 to PG&E requesting their review and comment.
407	Verizon	04/10/2014	E-mail	HMM - T. Grau	Forwarded entire draft CUP drawing set for CP 2-3 to Verizon requesting their review and comment.
408	Fresno Irrigation District	04/10/2014	Email	HMM - T. Grau	Felix Vaquilar indicates FID will pause HSR work until an Environmental Permit is resolved.
409	PG&E	04/11/2014	Email	HMM - T. Grau	Dale Overbay acknowledged receipt of plans. Will try to schedule a meeting within a couple of weeks
410	Fresno Irrigation District	04/14/2014	Phone	HMM - T. Grau	FID Board has directed its staff not to expend effort on CHSRA related work until an unrelated issue with environmental permitting related to Fish & Wildlife that reportedly reared up due to HSR project is resolved.
411	Consolidated Irrigation District	04/15/2014	Email	HMM - T. Grau	Acknowledged Lupe Chavez' VM and directed him to C. Ramirez with RC.
412	PG&E	04/15/2014	E-mail	HMM - T. Grau	Forwarded entire draft CUP drawing set for CP 2-3 to SCE requesting their review and comment.
413	Southern California Gas (Sempra)	04/16/2014	Email	HMM - T. Grau	Chad Mueller sent mapping confirming gas line crises-crossing at Chestnut.
414	SCE	04/16/2014	Email	HMM - T. Grau	Received SCE data request packet to be used for obtaining SCE infrastructure mapping for CP 2-3.
415	PG&E	04/16/2014	Email	HMM - T. Grau	12/02/2013 Meeting notes - sent to Dale Overbay
416	City of Corcoran	04/16/2014	Email	HMM - T. Grau	01/30/2014 Meeting notes - sent to Steve Kroeker
417	Corcoran Irrigation District	04/16/2014	Email	HMM - T. Grau	01/30/2014 Meeting notes - sent to Gene Kilgore
418	Southern California Gas (Sempra)	04/16/2014	Email	HMM - T. Grau	01/07/2014 Meeting notes - sent to Chad Mueller
419	AT&T	04/16/2014	Email	HMM - T. Grau	03/25/2014 Meeting notes - sent to Beverly Patton
420	Level 3 Communications	04/16/2014	Phone	HMM - C. Ramirez	Left voice mail with Sam Isaacson to confirm receipt of CUP
421	Verizon - Telecom	04/16/2014	Phone	HMM - C. Ramirez	Left voice mail with Larry Vail to confirm receipt of CUP
422	Comcast Cable	04/16/2014	Phone	HMM - C. Ramirez	Left voice mail with Craig Cordova to confirm receipt of CUP
423	Lakeside Irrigation District	04/16/2014	Phone	HMM - C. Ramirez	Left voice mail with Bob Schafer (@ LID and his office) to confirm receipt of CUP
424	City of Corcoran	04/16/2014	Phone	HMM - C. Ramirez	Left voice mail with Steve Kroeker to confirm receipt of CUP
425	SCE	04/16/2014	Phone	HMM - C. Ramirez	Left voice mail with Ken Spear to confirm receipt of CUP
426	Consolidated Irrigation District	04/16/2014	Phone	HMM - C. Ramirez	Left voice mail with Lupe Chavez to confirm receipt of CUP
427	County of Tulare-Resource Management Agency	04/16/2014	Phone	HMM - C. Ramirez	Spoke with Reed Schenke. Reed has drafted a letter indicating that the County does not have utilities within HSR project limits. Their improvements are limited to roadways.
428	PG&E	04/17/2014	Email	HMM - T. Grau	D. Overbay returned the draft final 4/17/2014 Meeting notes with recommended revisions.
429	PG&E	04/21/2014	Email	HMM - T. Grau	D. Overbay indicated PG&E is available to meet next week on CP 2-3 (and CP 1).
430	Level 3 Communications	04/22/2014	Email	HMM - T. Grau	Matt Prink responded regarding CUP package sent to Sam Isaacson. Mr. Prink requested a KMZ of the project alignment limits.

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431	PG&E	04/23/2014	Email	HMM - T. Grau	D. Overbay suggested meeting following Wednesday or Thursday and requested agenda include Contract Schedule, Notice to Proceed, Completion Date, and Identified conflicts and their approximate costs and timelines. Later in day requested discussion of relocation of 230 kV line and a site visit.
432	Consolidated Irrigation District	04/23/2014	Phone	HMM - C. Ramirez	Left voice mail with Lupe Chavez to confirm receipt of CUP
433	PG&E	04/25/2014	E-mail	HMM - T. Grau	D. Overbay confirmed meeting time and date for May 1, 2014 in PG&E Fresno office.
434	AT&T	04/28/2014	Email	HMM - T. Grau	Received GIS files
435	SCE	04/28/2014	E-mail	HMM-T.Grau	Forwarded completed infrastructure mapping data request for CP 2-3 to SCE.
436	SCE	05/01/2014	E-mail	HMM - T. Grau	Sent conference call meeting invite for May 2, 2014 to review SCE data request protocol.
437	SCE	05/02/2014	Phone	HMM - T. Grau	Conference call between RC and SCE. SCE introduced several key staff who will be involved in the HSR project. SCE indicated that they have facilities in the Hanford area which will be impacted. Three SCE business unit go through plans for proposed projects so getting proper communication and review process in place is essential. SCE very busy and cannot waste resources on preliminary alignments. Tentatively set the week of May 12th for an initial coordination meeting in SCE Visalia office.
438	SCE	05/02/2004	E-mail	HMM-T.Grau	Forwarded e-mail to SCE with directions to ftp site with entire draft CUP drawing set for CP 2-3 and SCE requesting review and comment.
439	SCE	05/02/2014	E-mail	HMM-T.Grau	Forwarded revised infrastructure mapping data request for CP 2-3 to SCE.
440	PG&E	05/07/2014	E-mail	HMM - T. Grau	PG&E could not supply specific document stating the HV towers are not design to topple over.
441	PG&E	05/16/2014	E-mail	HMM-T.Grau	05/01/2013 Meeting Notes - sent to Dale Overbay
442	SCE	05/16/2014	E-mail	HMM-T.Grau	Follow-up to Ken Spear relative to having progressed sufficiently on 3rd Party negotiations to allow SCE to convene and initial utilities coordination meeting with RC.
443	PG&E	05/16/2014	E-mail	HMM-T.Grau	Forwarded slightly revised May 2, 2014 meeting notes (PMT request) for PG&E review.
444	SCE	05/20/2014	E-mail	HMM - T. Grau	Response top RC 5/16/2014 e-mail. SCE to have internal meeting today. Getting 'close' to being able to schedule initial utilities coordination meeting.
445	SCE	05/23/2014	E-mail	HMM - T. Grau	SCE requested initial utilities coordination meeting for May 30, 2014.
446	Southern California Gas (Sempra)	05/23/2014	E-mail	HMM - T. Grau	Follow-up to Chad Mueller on review of draft CUP package forwarded to Sempra on April 8, 2014 and requesting any update on status of 3rd Party Agreement.
447	Southern California Gas (Sempra)	05/27/2014	E-mail	HMM - T. Grau	Sempra has made cursory review of draft CUP package and will run through again this week. No update on 3rd Party Agreement status.
448	Southern California Gas (Sempra)	05/27/2014	E-mail	HMM - T. Grau	RC inquired as to whether or not Sempra could meet on May 30th to review draft CUP package.
449	Southern California Gas (Sempra)	05/27/2014	E-mail	HMM - T. Grau	Confirmed draft CUP package review with Sempra for 2 PM on May 30th.
450	PG&E	05/27/2014	Phone	HMM - T. Grau	Left VM for PG&E following up on whether or not they had opportunity to review draft CUP package. Also requested tentative meeting dates to review HV transmission line relocation for CP 2-3.
451	PG&E	06/02/2014	E-mail	HMM - T. Grau	G. Fleming sent meeting invite for June 17, 2014 to review PG&E HV relocation concept.
452	SCE	06/06/2014	E-mail	HMM - T. Grau	Forwarded 2nd revision of infrastructure mapping data request for CP 2-3 to SCE.
453	SCE	06/11/2014	E-mail	HMM - T. Grau	F. Guerra of SCE requested information on entity name and billing
454	SCE	06/13/2014	E-mail	HMM - T. Grau	RC responded to SCE mapping department request on entity name and billing address for infrastructure mapping.
455	Kern County	06/10/2014	Phone/Email	HMM - C. Ramirez	Spoke with Donna Fujihara. Donna will review, send us forms to complete, then delegate someone to provide information.
456	GEI Consultants	06/12/2014	Phone	HMM - C. Ramirez	Left Voice Mail for Isela Medina at GEI
457	Equilon Enterprises, DBA Shell Oil Products	06/13/2014	Phone	HMM - C. Ramirez	Left Voice Mail for Russell Guidry

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458	Alon USA Energy (Paramount Petroleum Corporation)	06/13/2014	Phone	HMM - C. Ramirez	Left Voice Mail for Wes Mikes. Paramount operates an asphalt facility approximately 10 miles east of SFW/7th Std.
459	Comcast Cable	06/13/2014	Phone	HMM - C. Ramirez	Spoke with Craig Cordova. He indicated that Comcast provided information for most of the alignment years ago. He will find out who provided the mapping and who it was provided to.
460	Comcast Cable	06/13/2014	Email	HMM - C. Ramirez	Per Craig's email: "The farthest south Comcast goes is Corcoran……". Therefore no Comcast within CP4
461	PG&E	06/16/2014	E-mails (and VM)	HMM - T. Grau	Requested deferral of meeting on HV concept relocations until after CHSRA EIR Record of Decision.
462	Southern California Gas (Sempra)	06/16/2014	E-mail	HMM - T. Grau	5/30/2014 Meeting Notes sent to C. Mueller.
463	SCE	06/16/2014	E-mail	HMM - T. Grau	5/30/2014 Meeting Notes sent to K. Spear.
464	City of Wasco	06/16/2014	Phone/Email	HMM - C. Ramirez	Spoke with Paul Paris (current PW director), 661-758-7223. He promptly sent pdfs of sewer, water and drainage systems.
465	GEI Consultants	06/16/2014	Phone	HMM - C. Ramirez	Spoke with Isela Medina at GEI. They are compiling base mapping, as-builts, and prior rights research of utilities impacted by HSR project. Mapping is being done for 3 companies. They anticipate completing the task by 6/30/2014.
466	Vaughn Water Company (via Dee Jaspar & Assoc.)	06/16/2014	E-mail & Letter	HMM - C. Ramirez	HSR received correspondence via consulting engineer.
467	SCE	06/17/2014	E-mail	HMM - T. Grau	Acknowledgment of receipt of 5/30/2014 Meeting Notes.
468	Kern County	06/18/2014	Phone	HMM - C. Ramirez	Spoke with Donna Fujihara. Kern County previously provided most information. They will re-send soon.
469	Equilon Enterprises, DBA Shell Oil Products	06/19/2014	Phone	HMM - C. Ramirez	Left Voice Mail for Russell Guidry. Followed up with email. Mr. Guidry responded with clear direction and contact information.
470	Southern San Joaquin Municipal Utility District	06/18/2014	Phone/Email	HMM - C. Ramirez	Spoke with John Bonkosky (Field Superintendent) at SSJMUD, then forwarded letter and FTP site information.
471	SCE	06/18/2014	E-mail	HMM - T. Grau	SCE forwarded request for $50,000. advance for researching and forwarding requested infrastructure mapping for CP 2-3 impact areas.
472	City of Wasco	06/19/2014	E-mail	HMM - C. Ramirez	Left follow up voice mail with Paul Paris
473	Alon USA Energy (Paramount Petroleum Corporation)	06/20/2014	Phone	HMM - C. Ramirez	Left Voice Mail for Wes Mikes.
474	City of Shafter	06/20/2014	Phone	HMM - C. Ramirez	Spoke with Michael James. He will provide pipe size info soon.
475	SCE	06/20/2014	E-mail	HMM - T. Grau	Forwarded infrastructure mapping data request for CP 4 to SCE.
476	Southern California Gas (Sempra)	06/20/2014	E-mail & VM	HMM - T. Grau	Follow-up with C. Mueller on whether or not he had opportunity to review 5/30/2014 Meeting Notes.
477	City of Shafter	06/23/2014	Email	HMM - C. Ramirez	Michael James provided additional mapping via dropbox.

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478	GEI Consultants	06/23/2014	Phone	HMM - C. Ramirez	Left voice mail for Isela Medina regarding pump station west of Shuster & Magnolia
479	Southern San Joaquin Municipal Utility District	06/23/2014	Phone	HMM - C. Ramirez	Left VM for John Bonkosky.
480	Alon USA Energy (Paramount Petroleum Corporation)	06/23/2014	Email	HMM - C. Ramirez	Sent email to Wes Mikes
481	Kern County	06/23/2014	Email	HMM - C. Ramirez	Bob Downs: KC does note have utilities along alignment.
482	Alon USA Energy (Paramount Petroleum Corporation)	06/24/2014	Email	HMM - C. Ramirez	Received contact info from Moshen Ahmadi. They will need at least one week for review and response
483	City of Shafter	06/24/2014	Phone	HMM - C. Ramirez	Michael James provided files via Sharefile
484	Equilon Enterprises, DBA Shell Oil Products	06/26/2014	Email	HMM - C. Ramirez	Dave Felger received "A" letter plans.
485	SCE	06/26/2014	E-mail	HMM - T. Grau	SCE requested a GIS Shape file for CP 4 project area.
486	SCE	06/26/2014	E-mail	HMM - T. Grau	RC requested SCE make an overview of its service area maps vs. the CP 4 projet areas since it appeared that PG&E was the predominant energy supplier from information RC has received from PG&E.
487	Kern County	06/26/2014	Email	HMM - C. Ramirez	Kevin Hamilton: No storm drain facilities
488	Southern San Joaquin Municipal Utility District	06/27/2014	Email	HMM - C. Ramirez	Jon Bonkosky: No Utilities
489	SCE	06/26/2014	E-mail	HMM - T. Grau	SCE agreed to compare CP 4 project area to its service area mapping. Also inquired as to the status of the infrastructure mapping data request for CP 2-3 so that SCE could get going under the requested engineering advance ($50k).
490	SCE	06/26/2014	E-mail	HMM - T. Grau	RC confirmed that the revised data request was forwarded to SCE on June 6th, but that CHSRA cannot consent to $50k advance payment. Suggested a work around similar to how reimbursement for mapping was handled with AT&T.
491	SCE	06/27/2014	E-mail	HMM - T. Grau	SCE acknowledged receipt of CP 2-3 data request, but that RC must overlay the SCE FIM maps on the HSR route map and resubmit. Also indicated that the inability to furnish SCE with the requested $50K advance may be problematic.
492	City of Wasco	07/01/2014	Phone/Email	HMM - C. Ramirez	Left follow up voice mail with Paul Paris. Paul responded: still working on gathering maps.
493	Equilon Enterprises, DBA Shell Oil Products	07/01/2014	Email	HMM - C. Ramirez	Dave Felger: Anticipates completing by 7-22-2014.
494	Verizon	07/01/2014	Phone/Email	HMM - T. Grau	Spoke with Larry Vail. Additional time due to TPA and resources.
495	North Kern Water Storage District (via GEI Consultants)	07/01/2014	Letter	HMM - T. Grau	Received mapping in response to A letter.
496	Semitropic Water Storage District (via GEI Consultants)	07/01/2014	Letter	HMM - T. Grau	Received mapping in response to A letter.
497	Shafter-Wasco Irrigation District (via GEI Consultants)	07/01/2014	Letter	HMM - T. Grau	Received mapping in response to A letter.
498	Verizon	07/01/2014	Phone	HMM - T. Grau	RC spoke with Larry Vail on status of review of draft CUP for CP 2-3. Nothing done as no 3rd Party Agreement in place. Verizon area engineer responsible for CP 2-3 in bad motorcycle accident over the Memorial Day weekend. Do not have a replacement identified yet. Advised RC to follow up in about a week.
499	SCE	07/01/2014	E-mail	HMM - T. Grau	SCE reported that they had reviewed the data request for CP 4 and determined that their service area is not impacted by CP 4.
500	SCE	07/01/2014	E-mail	HMM - T. Grau	RC inquired as to whether or not SCE could provide an estimate for pulling and forwarding just the several FIM maps in the Hanford area which SCE had identified as the section of their service area impacted by CP 2-3.
501	PG&E	07/01/2014	E-mail	HMM - T. Grau	Requested additional mapping for PG&E facilities impacted by CP 4. Also requested viable dates for rescheduling of deferred meeting to discuss concept relocations of PG&E HV facilities.
502	SCE	07/01/2014	E-mail	HMM - T. Grau	SCE suggested contacting their mapping department through the normal data request process to get an estimate of cost to provide requested CP 2-3 mapping.

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503	SCE	07/01/2014	E-mail	HMM - T. Grau	RC requested estimate from SCE mapping department for CP 2-3 mapping.
504	Antonio Molina	07/02/2014	Email	HMM - T. Ramil	No information regarding petroleum pipelines
505	Southern California Gas (Sempra)	07/02/2014	E-mail	HMM - T. Grau	C. Mueller of Sempra had no comments on 5/30/2014 Meeting Notes and no update on 3rd Party Agreement status.
506	Southern California Gas (Sempra)	07/02/2014	E-mail	HMM - T. Grau	RC requested 'standard SCE detail' for cased gas lines on behalf of PMT.
507	SCE	07/02/2014	E-mail	HMM - T. Grau	SCE Mapping Dept. requested clarification on what utilities RC was requesting mapping for.
508	AT&T	07/02/2014	E-mail	HMM - T. Grau	RC inquired as to status of invoice for infrastructure mapping furnished by AT&T.
509	SCE	07/02/2014	E-mail	HMM - T. Grau	RC provided detailed explanation of the infrastructure mapping required.
510	PG&E	07/02/2014	E-mail	HMM - T. Grau	PG&E requested approximate dates for convening the deferred HV relocation meeting relative to CP 2-3.
511	PG&E	07/02/2014	E-mail	HMM - T. Grau	PG&E sent five e-mails with large mapping attachments for CP 4 project area.
512	City of Wasco	07/03/2014	Email	HMM - C. Ramirez	Received CAD file with more sewer information.
513	SCE	07/03/2014	E-mail	HMM - T. Grau	SCE Mapping Dept. forwarded RC Critical Infrastructure Non-Disclosure and Use Agreement forms as a prerequisite to furnishing RC with the requested CP 2-3 facility infrastructure mapping.
514	Verizon	07/07/2014	Phone	HMM - T. Grau	Left VM for Larry Vail relative to status of identifying a fill-in engineer for CP 2-3 area and trying to set up an initial utilities coordination meeting.
515	City of Wasco	07/07/2014	Email	HMM - C. Ramirez	Confirmation of septic system.
516	Alon USA Energy (Paramount Petroleum Corporation)	07/09/2014	Phone/Email	HMM - C. Ramirez	Left VM regarding status. Response: no pipeline within project.
517	SCE	07/09/2014	E-mail	HMM - T. Grau	SCE Mapping Dept. forwarded cost to furnish requested CP 2-3 infrastructure mapping.
518	SCE	07/14/2014	E-mail	HMM - T. Grau	SCE looking into work around to the $50k escrow they had requested for initial facility mapping request. Requested details supporting CHRSA's inability to approve advance escrows which could be presented to SCE management.
519	SCE	07/14/2014	E-mail	HMM - T. Grau	RC indicated that SCE mapping department had provided a $350 estimate to furnish requested infrastructure mapping for impact areas in CP 2-3. Also requested SCE look into whether or not their infrastructure in the impact area is classified as 'critical facilities or not. If not RC (and any subsequent viewers of the mapping) would not have to execute the Non-Disclosure and Use Agreement forms.
520	SCE	07/14/2014	E-mail	HMM - T. Grau	SCE agreed to look into classification of their facilities in CP 2-3 impact area.
521	SCE	07/14/2014	E-mail	HMM - T. Grau	Forwarded SCE mapping department request to K. Spear relative to upfront payment of the $350.
522	PG&E	07/14/2014	E-mail	HMM - T. Ramil	PG&E forwarded a spreadsheet with potential transmission conflicts, prepared when HSR was originally proposed.
523	Southern California Gas (Sempra)	07/17/2014	Phone	HMM - T. Grau	RC followed up on request for Sempra standard detail applicable to cased gas mains. C. Mueller provided some general concept guidelines but not a drawing.
524	SCE	07/23/2014	E-mail	HMM - T. Grau	SCE indicated that the CP 2-3 infrastructure mapping requested is classified as critical energy infrastructure and that RC staff and others who view the mapping are required to sign the Non-Disclosure and Use Agreement forms. SCE also prompted RC to provide the basis for CHSRA's inability to provide up-front escrows.
525	Equilon Enterprises, DBA Shell Oil Products	07/23/2014	Email	HMM - C. Ramirez	Dave Felger will respond within one week
526	Fresno Irrigation District	07/24/2014	E-mail	HMM - T. Grau	FID provided comments back on the draft CP 2-3 CUP package forwarded to them in April.
527	PG&E	07/25/2014	E-mail	HMM - T. Grau	Sent note to PG&E indicating that RC had scheduled the CP 2-3 HV relocation concept meeting for July 31, 2014.
528	Fresno Irrigation District	07/30/2014	E-mail	HMM - T. Grau	FID provided supplemental (unrequested) information relative to borrow material and water quantities available for construction.
529	Equilon Enterprises, DBA Shell Oil Products	08/01/2014	Letter	HMM - C. Ramirez	Received mapping and letter dated 7/25/2014.

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No.	Owner	Date	Correspondence Type	Correspondence By	Description
530	PG&E	08/01/2014	E-mail	HMM - T. Grau	RC and PG&E confirmed time and date (8/7/14 @ 9:30 AM) for a working session meeting to review the specific issues impacting relocation of the existing PG&E Kingsburg-Corcoran HV transmission line between Excelsior Road and Rt. 198.
531	PG&E	08/04/2014	E-mail & VM	HMM - T. Ramil	RC forwarded Google Earth images for areas in Wasco and adjacent to 7th Standard Road for which PG&E HV mapping is requested.
532	PG&E	08/05/2014	E-mail	HMM - T. Grau	PG&E stated that they would like 100 foot wide easements for HV transmission lines. PG&E again checking with engineering on any available information on HV tower catastrophic failure analysis.
533	PG&E	08/05/2014	E-mail	HMM - T. Grau	RC inquired as to whether or not the towers would have to be centered in the 100 foot rights-of-way.
534	PG&E	08/05/2014	E-mail	HMM - T. Grau	D. Overbay of PG&E advised RC to focus on direct conflicts. Exceptions to centering towers in the required rights-of-way may be possible in some cases.
535	AT&T	08/12/2014	E-mail	HMM - T. Grau	AT&T forwarded their invoice for furnishing the "A" letter mapping.
536	SCE	08/12/2014	E-mail	HMM - T. Grau	RC inquired with SCE mapping department as to status of processing the CP 2-3 infrastructure mapping request.
537	SCE	08/12/2014	E-mail	HMM - T. Grau	SCE Mapping Dept. indicated that check request sent to wrong location. Requested SCE mapping was mailed on 8/12/2014.
538	Kern County	08/12/2014	Letter	HMM - C. Ramirez	Received mapping and letter dated 8/05/2014. Plans are predominantly 7th Standard Rd improvements.
539	SCE	08/19/2014	Letter	HMM - T. Grau	Received infrastructure mapping from SCE.
540	North Kern Water Storage District	08/20/2014	E-mail	HMM - T. Grau	Forwarded draft CUP package for CP 4 to North Kern Water Storage District highlighting plotted NKSD facilities and requesting their review and comment.
541	Semitropic Water Storage District	08/20/2014	E-mail	HMM - T. Grau	Forwarded draft CUP package for CP 4 to Semitropic Water Storage District highlighting plotted SWSD facilities and requesting their review and comment.
542	Brighthouse Networks	08/20/2014	E-mail	HMM - T. Grau	Forwarded draft CUP package for CP 4 to Brighthouse Networks highlighting plotted Brighthouse Networks facilities and requesting their review and comment.
543	GEI Consultants (on behalf of NKWSD)	08/20/2014	E-mail	HMM - T. Grau	Based upon cursory review, some of NKWSD facilities are not included in the draft CUP package forwarded earlier in the day.
544	Vintage Production California, LLC	08/21/2014	E-mail & Phone	HMM - T. Grau	RC forwarded WS-1 A letter exhibits to Vintage for their initial assessment as to potential HSR impacts.
545	Vintage Production California, LLC	08/21/2014	E-mail	HMM - T. Grau	X/ Grijalva of Vintage acknowledged receipt of exhibits and forwarded them on to proper person within Vintage for review.
546	GEI Consultants (on behalf of NKWSD)	08/21/2014	E-mail	HMM - T. Grau	RC indicated that NKWSD facilities omitted from draft CUP package are open channel conveyances and have been forwarded to the RC HH&D team for review and action.
547	GEI Consultants (on behalf of SWSD)	08/21/2014	E-mail	HMM - T. Grau	GEI requested a copy of Utility Sheet UT-C4536 which was reportedly missing from the draft CUP package sent for SWSD review and comment.
548	GEI Consultants (on behalf of SWSD)	08/21/2014	E-mail	HMM - T. Grau	RC forward utility Sheet UT-C4536 as requested.
549	Occidental Petroleum	08/21/2014	Phone	HMM - T. Grau	RC left detailed message with administrative assistant for Heather Skanzi at Oxy regarding obtaining mapping of any underground piping Oxy may have in CP 4 project area.
550	GEI Consultants (on behalf of NKWSD)	08/22/2014	E-mail	HMM - T. Grau	GEI inquired as to when they can expect to see the HSR HH&D drawings depicting open channel conveyance impacts.
551	Shell Oil Products	08/22/2014	E-mail	HMM - T. Grau	Forwarded draft CUP package for CP 4 to Shell Oil Products highlighting plotted Shell facilities and requesting their review and comment. Also questioned whether or not Shell owns a pipeline along Merced Avenue.
552	Southern California Gas (Sempra)	08/22/2014	E-mail	HMM - T. Grau	Forwarded draft CUP package for CP 4 to Sempra highlighting plotted Sempra facilities and requesting their review and comment.
553	Chevron	08/22/2014	Phone	HMM - T. Grau	Left VM with Mike Oliphant who had previously responded to earlier A letters sent to Chevron, specifically in regard to abandoned crude oil pipelines. Requested info relative to active pipelines in CP 4 project area for which witness markers were observed during recent site visit.
554	Shell Oil Products	08/22/2014	E-mail	HMM - T. Grau	Received PDFs for Shell oil pipeline along Merced Avenue.

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No.	Owner	Date	Correspondence Type	Correspondence By	Description
555	Shell Oil Products	08/22/2014	E-mail	HMM - T. Grau	RC requested additional mapping for Shell Oil facilities along Burbank St. west of Hwy. 43 to Golds Avenue and along Cherry Avenue. Also inquired if Mr. Felger could shed light on who owned the parallel high pressure gas line on Merced Avenue for which witness markers were observed in the field.
556	City of Shafter	08/22/2014	E-mail	HMM - T. Grau	Forwarded draft CUP package for CP 4 to the City of Shafter highlighting plotted City facilities and requesting their review and comment.
557	City of Wasco	08/22/2014	E-mail	HMM - T. Grau	Forwarded draft CUP package for CP 4 to the City of Wasco highlighting plotted City facilities and requesting their review and comment.
558	Shell Oil Products	08/22/2014	E-mail	HMM - T. Grau	D. Felger of Shell suggested contacting Chevron Pipeline relative to high pressure gas line along Merced Avenue.
559	Chevron Pipeline Services	08/25/2014	Phone	HMM - T. Grau	Left VM for Chevron Pipeline relative to high pressure gas line witness markers observed in the Shafter area.
560	Chevron Pipeline Services	08/26/2014	Phone	HMM - T. Grau	J. Simmons returned VM and indicated that Chevron has several units which manage pipelines. Chevron Env. Management, who had previously responded to earlier A letters is responsible for legacy pipelines. Chevron Pipeline manages active pipelines.
561	Chevron Pipeline Services	08/26/2014	Phone	HMM - T. Grau	Forwarded the earlier Chevron A letter response to RC from Chevron Env. Management and the A letter Ws-1 exhibits.
562	Vintage Production California, LLC	08/26/2014	E-mail	HMM - T. Grau	A. Morales of Vintage stated that Tim Mahaffey - Vintage Manager Land Region will be contact person relative to buried utilities in CP 4 project area.
563	Occidental Petroleum	08/26/2014	E-mail & Phone	HMM - T. Grau	Disregard previous contact information provided by Vintage Production California, LLC. Vintage is an affiliate of Oxy. Mr. Ledbetter will be point of contact for buried utilities in CP 4 project area.
564	Occidental Petroleum	08/26/2014	E-Mail	HMM - T. Grau	Sent e-mail with ftp link to GIS shape files for CP 2-3 and CP 4 project area.
565	Chevron Pipeline Services	08/26/2014	Phone	HMM - T. Grau	Sent e-mail with ftp link to GIS shape files for CP 2-3 and CP 4 project area.
566	Michael Mills (on behalf of Occidental Petroleum)	08/26/2014	E-mail	HMM - T. Grau	RC copied on e-mail from M. Mills to Diana Gomez clarifying that communication relative to Vintage Productions and Occidental Petroleum relative to the HSR project is to be routed through Russ Ledbetter.
567	Chevron Pipeline Services	08/27/2014	E-mail	HMM - T. Grau	Chevron (J. Simmons) requesting APN for lots impacted by HSR project as this is presents a more expeditious method for Chevron to assess potentially impacted facilities. Reviewing the exhibits presents a major unfunded effort on Chevron personnel.
568	Shell Oil Products	09/03/2014	E-mail	HMM - T. Grau	RC follow-up with Shell on requested mapping for facilities in Burbank Street and Merced Avenue.
569	Occidental Petroleum	09/03/2014	Phone	HMM - T. Grau	RC follow-up with Occidental on requested mapping for facilities impacted by CP 4. Oxy confirmed that they were able to access the GIS shape files and A letter exhibits placed on the ftp site and would be reviewing same.
570	Occidental Petroleum	09/03/2014	E-mail	HMM - T. Grau	HSR exhibits and shape files have been passed on to the Oxy Operations division for review. Should have a response in 2-3 weeks.
571	PG&E	09/03/2014	Phone	HMM - T. Grau	PG&E confirmed that they have no comments on 07/31/2014 Meeting Notes forwarded for their review and comment.
572	City of Shafter	09/03/2014	E-Mail	HMM - C. Ramirez	Sent screen shot of storm drain facilities on E.Los Angeles Ave. to Kevin Harmon, City Engineer, to review.
573	City of Shafter	09/04/2014	E-mail	HMM - C. Ramirez	Recived mapping for City of Shafter fiber optic lines.
574	City of Shafter	09/05/2014	E-mail	HMM - C. Ramirez	Received storm drain plans for the E. Lerdo and BNSF area near HSR alignment.
575	Shell Oil Products	09/05/2014	E-Mail	HMM - T. Grau	RC forwarded MZ files with Environmental footprint and a second with Township Ranges and Sections bracketing the HSR alignment to facilitate local agency response to A-Letter Exhibits.
576	Chevron Pipeline Services	09/05/2014	E-Mail	HMM - T. Grau	RC forwarded MZ files with Environmental footprint and a second with Township Ranges and Sections bracketing the HSR alignment to facilitate local agency response to A-Letter Exhibits.
577	PG&E	09/08/2014	E-Mail	HMM - T. Grau	Forward August 7, 2014 Meeting Notes for HV Relocation Working Meeting to Dale Overbay for review.
578	Brighthouse Networks	09/08/2014	E-Mail	HMM - T. Grau	Greg Eoff acknowledged receipt of draft CUP review package for CP 4 and indicated he will target completion of his review for following week.

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No.	Owner	Date	Correspondence Type	Correspondence By	Description
579	PG&E	09/09/2014	E-Mail	HMM - T. Grau	PG&E acknowledged receipt of Meeting Notes sent on September 8th.
580	Shell Oil Products	09/12/2014	E-Mail	HMM - T. Grau	RC follow-up with Alex Meza at Shell on mapping requested for Shell Oil Product pipelines.
581	Chevron Pipeline Services	09/12/2014	E-Mail	HMM - T. Grau	RC follow-up with John Simmons at Chevron on mapping requested for Shell Oil Product pipelines.
582	Chevron Pipeline Services	09/15/2014	E-Mail	HMM - T. Grau	Receipt of pdfs from Chevron with pipeline facilities that the Pipeline Services division of Chevron is responsible for. Referred RC to EMC division of Chevron for pipelines maintained by that group (RC already received information via letter in Fall 2013 regarding abandoned pipelines along alignments for CP 2-3 and CP 4.
583	Occidental Petroleum	09/18/2014	E-Mail	HMM - T. Grau	Oxy forwarded WORD doc versions of the RC A - letter exhibits previously forward to OXY for review and response to A - letters. No new information.
584	Occidental Petroleum	09/18/2014	Phone	HMM - T. Ramil	Left Voicemail for John Price and John Tierce: Requested clarification on email sent to RC in regards to identifyig any facility, pipelines, etc. buried or above ground that may be impacted by construction.
585	Shell Oil Products	09/19/2014	Mail	HMM - T. Grau	Receipt of supplemental hard copy maps from Shell Oil.
586	Brighthouse Networks	09/22/2014	E-mail	HMM - T. Grau	Greg Eoff indicated the draft CP CUP reflected Brighthouse Network's existing plant.
587	GEI Consultants	09/22/2014	Phone/Email	HMM - C. Ramirez	RC follow-up to local agency requesting any agency review comments on draft CUP plans dated 8/22/2014
588	City of Wasco	09/22/2014	Phone/Email	HMM - C. Ramirez	RC follow-up to local agency requesting any agency review comments on draft CUP plans dated 8/22/2014
589	City of Shafter	09/22/2014	Phone/Email	HMM - C. Ramirez	RC follow-up to local agency requesting any agency review comments on draft CUP plans dated 8/22/2014
590	City of Wasco	09/24/2014	E-Mail	HMM - C. Ramirez	Bob Wren, Deputy DPW Director, stated that city mapping furnished to the CAHSRA reflects estimated utility locations and therefore "conflicts are still possible when the actual surveyed locations of City utilities and HSR infrastructure are determined".
591	Occidental Petroleum	09/25/2014	Phone	HMM - T. Ramil	Spoke to John Price: John P. mentioned that the information he sent on the email dated 09/18, was sent to him by John Tierce. He requested that we call John Tierce for clarification
592	Occidental Petroleum	09/25/2014	Phone	HMM - T. Ramil	Spoke to John Tierce: John T. said the word documents we scanned and used for him and his staff to see the areas of intereste by the RC for information. He mentioned to help clarify the RC's request for facilities, he will send as-built survey notes of the of facility conflicts next week (week of 09/29).
593	City of Shafter	09/30/2014	E-Mail	HMM - C. Ramirez	City DPW Director Michael James forwarded summary e-mail indicating the records sent on Sept.. 22nd completed his review. Has passed draft cup onto the City Engineer and City Manager.
594	City of Shafter	09/30/2014	E-Mail	HMM - C. Ramirez	City Engineer Scott Hurlbert forwarded an e-mail with comments pertaining primarily to non-utility issues which he made in reviewing the draft CUP package sent to the City for review.
595	Occidental Petroleum	10/06/2014	Phone	HMM - T. Ramil	Left Voicemail for John Tierce: Requested status of sending the RC as-built survey notes of conflicting facilties to HST.

APPENDIX D.4 Special Utility Considerations

F-B Special Utility Considerations
Roadway Underpass

HST Alignment	Road Name	Road Alignment	Station Range	Impacted Utility	Utility Owner	Utility Specs	Existing Conditions Description
WS1	Kimberlina Ave	KBA	6+90 TO 28+00	Irrigation Line	Shafter-Wasco Irrigation District	66" Diameter	Irrigation pipe runs east-west along southerly shoulder of Kimberlina Rd
		KBA	6+90 TO 28+00	Gas	Sempra	2" Diameter	Gas pipeline runs east-west along the northerly side of Kimberlina Road
		KBA	6+90 TO 28+00	Electric Line - Overhead	PG&E	12 kV	Overhead wire runs west-east along the northerly shoulder of Kimberlina Road
		KBA	7+00 TO 12+00	Telecommunication wire - Underground	AT&T	Unknown	Underground wire runs east-west along the northerly shoulder of Kimberlina Road
		KBA	7+20	Electric Line - Overhead	PG&E	12 kV	Overhead wire runs north-south along the easterly shoulder of State Highway 43
		KBA	7+20	Traffic Signals	Unknown	NA	Signal standards & signals at Kimberlina Road/Highway 43 intersection
		KBA	8+90	Electric Line - Overhead	PG&E	12 kV	Overhead wire extends northerly in north-south from north side of Kimberlina Road onto Shafter-Wasco ID headquarters site
		KBA	8+90 TO 13+10	Telecommunication wire - Overhead	AT&T	Unknown	Overhead wire runs east-west along the northerly shoulder of Kimberlina Road
		KBA	13+10 to 28+00	Telecommunication wire - Underground	AT&T	Unknown	Underground wire runs east-west along the northerly shoulder of Kimberlina Road
		KBA	11+20	Irrigation Line	Shafter-Wasco Irrigation District	15" Diameter	Underground pipe extends southerly in north-south direction from 66-inch irrigation line on the south side of Kimberlina Road
		KBA	11+40	Fiber Optic Line	Level 3 Communications	Unknown	Underground fiber optic runs north-south on the westerly side of BNSF ROW
		KBA	12+20	Telecommunication wire - Overhead	AT&T	Unknown	Overhead wire runs north-south along the along the easterly side of BNSF ROW
		KBA	12+45	Electric Line - Overhead	PG&E	12 kV	Overhead wire extends southerly in north-south from the northerly side of Kimberlina Road along easterly side of BNSF ROW
		KBA	18+30	Electric Line - Overhead	PG&E	12 kV	Overhead wire extends southerly in north-south direction from the northerly side of Kimberlina Road
		KBA	18+35	Telecommunication wire - Underground	AT&T	Unknown	Underground wire extends southerly in north-south direction from the northerly side of Kimberlina Road
		KBA	20+70	Electric Line - Overhead	PG&E	12 kV	Overhead wire extends northerly in north-south direction from the northerly side of Kimberlina Road
		KBA	23+90	Electric Line - Overhead	PG&E	12 kV	Overhead wire extends southerly in north-south direction from the northerly side of Kimberlina Road

Appendix E

Third-Party Coordination

FB - Third Party Coordination List

No.	Entity	Utility "A" Letters	HH&D Meeting	Other Communications
1	Alon USA Energy	Sent		VM on 6/13, 6/20 & 7//14, and E-Mail on 6/23 & 6/24/14
2	Alpaugh Irrigation Dist.	Sent	Yes	
3	AT&T	Sent		3/25/14 Utilities Coord. Mtg.
4	Brighthouse Networks, Inc.	Sent		
5	Chevron Pipeline Services	N/A		8/26/14 Sent GIS Shape Files for CP 2-3 and CP 4
6	City of Shafter	Sent	Yes	
7	City of Wasco	Sent	Yes	
8	County of Kern	Sent	Yes	
9	Equilon Enterprises, LLP dba Shell Oil Products USA and San Pablo Pay Pipeline Company LLC	Sent		VM on 6/13 & 6/19/14 and E-mail on 6/26, 7/1 & 7/23/14, and receipt of mapping on 8/1/14 (Shell Oil)
10	Level 3 Communications, LP			VM on 11/23, 11/26 & 12/10/13 and 4/16, and 4/22/14. Forward draft CP 2-3 CUP package on 4/9/13.
11	Occidental Petroleum	N/A		8/26/14 Sent GIS Shape Files for CP 2-3 and CP 4
12	North Kern Water Storage Dist.	Sent	Yes	
13	Pacific Bell and Telephone Company dba AT&T California			Refer to AT&T entry
14	Pacific Gas and Electric Company	Sent		8/7/14 Utilities Coord Mtgs.
15	Semitropic Water Storage Dist.	Sent	Yes	
16	Shafter-Wasco Irrigation Dist.	Sent	Yes	
17	Southern California Gas Company	Sent		1/7/14 & 5/30/14 Utilities Coord. Mtgs.
18	Vintage Production of California, LLC	N/A		8/21/14 Initial Contact E-mail